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BULLETIN
OF THE
PAN AMERICAN UNION

VOL. XXXIII
JULY–DECEMBER
1911

JOHN BARRETT : Director General
FRANCISCO J. YÁNES : : Assistant Director

WASHINGTON, D. C., U. S. A. : : : : : : :
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JULY 1911

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THE
PAN AMERICAN
UNION

JOHN BARRETT
DIRECTOR GENERAL
FRANCISCO J. YÁNES
ASSISTANT DIRECTOR

WASHINGTON
D.C..U.S.A.

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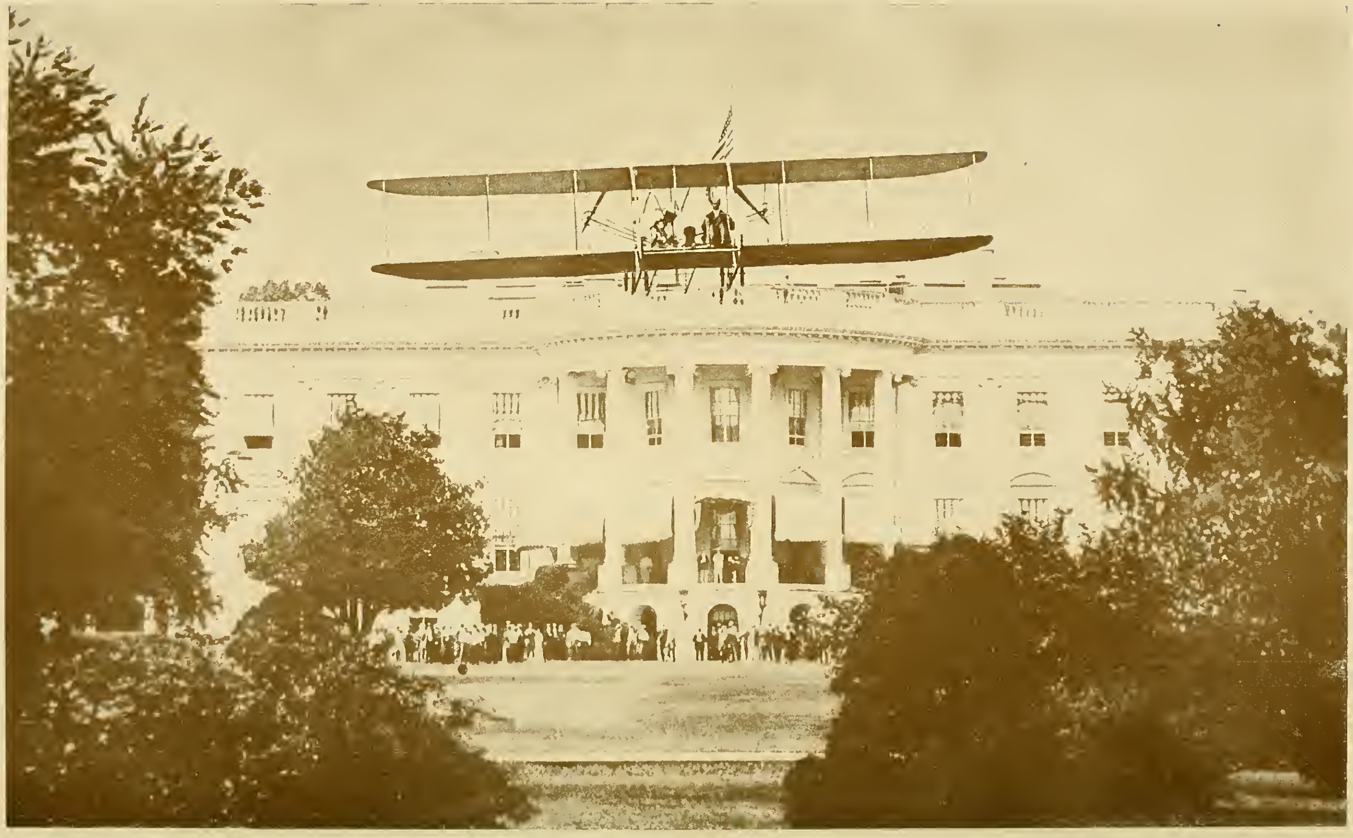

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AN AVIATOR'S CALL ON THE PRESIDENT AT THE WHITE HOUSE, JULY 14, 1911.

The young aviator, Harry N. Atwood, leaving the White House grounds after the completion of a 600 mile trip from Boston to Washington. President Taft presented a medal to Mr. Atwood on behalf of the Aero Club of Washington.

BULLETIN
OF THE PAN AMERICAN UNION

VOL. XXXIII JULY, 1911. NO. 1

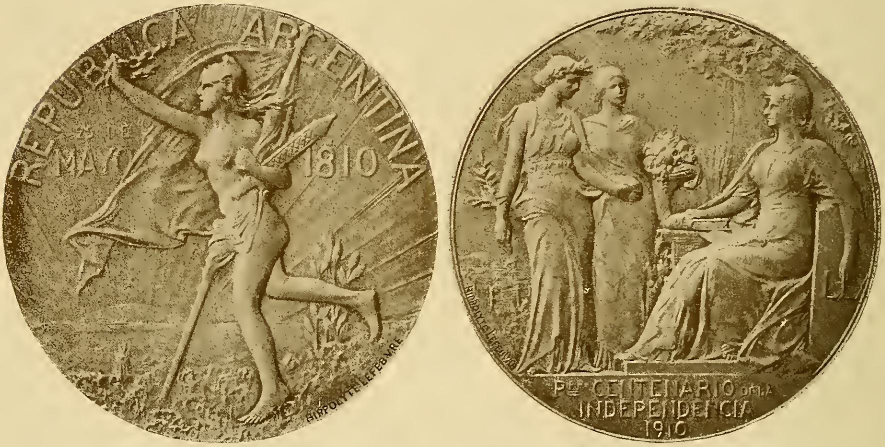
IN accordance with the precedent established several years ago, the July and August issues of the Bulletin are again devoted to the Annual Review of the Latin-American Republics. In this number is contained a careful résumé, prepared from the latest information and data available, of the commercial and economic progress of 8 of the 21 countries constituting the Pan American Union. These 8 countries were the first for which complete data came to hand, and it is hoped that the latest official statistics from all the remaining countries will be received in time to be included in the second part of the review. In addition to the usual valuable information on the governmental structure of the countries, their material resources, agricultural, industrial, and mineral development, many new features are added, among them being the duties of the cabinet officials and their departments, the press of the countries, a detailed description of the chief industry, and a retrospective summary of the general progress during the year just passed. Every effort has been made to include within the necessarily limited space available an accurate, succinct, yet comprehensive treatment of those subjects which will serve to answer the majority of inquiries that are constantly received at this institution. In the compilation of a work of this kind, where it is necessary to resort to sources from various nations employing diverse statistical methods, mistakes or errors may have been accidentally or unintentionally incorporated in the text, but these will be corrected in a subsequent issue if pointed out. In conjunction with the Annual Review numbers of the Bulletin it has been the policy of the Union to reprint for free distribution, in pamphlet form, the matter contained under each country separately. The demand for these has always been so universal that the practice will be continued again this year.

An important change has been made in the foreign section of the Bulletin of the Pan American Union. Commencing with the July number, the Spanish, Portuguese, and French sections which have heretofore appeared under one cover will be published as separate editions. There has been such a constant growing demand for the foreign sections of the Bulletin that it has been deemed advisable to issue them as separate publications. This policy will permit of an enlargement of the scope of each, and a greater proportionate space can now be allotted to the various countries. Considerable favorable comment anent this change has already come to the attention of the Union, and there is every indication that this new arrangement will be most favorably received throughout the Latin-American Republics.

LATIN AMERICA IN 1910.

THE year 1910 was the centennial year of independence throughout Latin America. This does not mean that every Republic celebrated on some particular day the one hundredth anniversary of its declaration of independence from a European power, because in several instances that declaration was made previously to 1810, but by common consent a general manifestation of the spirit of national freedom was given greatest expression during the year that has just passed.

Among the Republics whose celebrations took an active form were Chile, where a month was devoted to national and international festivities; Mexico, with somewhat similar displays of national enthusiasm, and Colombia, where the centennial spirit was quite as marked, although the Government decided to restrict public participation in it to national confines. Ecuador had celebrated its own centennial in 1909, in accord with its local history, but it joined with other Republics in the Latin-American feeling; Paraguay announced the official celebration for the year 1911; and Venezuela, while acknowledging the year of 1910, preferred to postpone its festivities until 1911, the centennial anniversary of the declaration of independence. Argentina's celebration consisted of a series of expositions to illustrate various phases of progress, by no means the least important of them being the railways and land transport exhibit. This gave an object lesson of the changes in transportation during the life of the Argentine Republic, and offered vital suggestions of what



MEDAL STRUCK BY THE ARGENTINE GOVERNMENT COMMEMORATIVE OF THE CENTENARY OF ITS INDEPENDENCE.

could be done in the future, as soon as Government or private capital should take the initiative.

As a matter of fact, the extension of means of transportation was a noticeable feature in Latin America during the year of 1910. The most remarkable event was the opening of the railway tunnel through the Andes, by which a train service was established, so it could be carried on without interruption throughout the year, between Buenos Aires, on the Atlantic shores of South America, and Valparaiso, on the Pacific. Another accomplishment of international interest is the construction of the bridge over the Suchiate River, forming at that point the boundary between the Republics of Mexico and Guatemala. Work was begun also on the short line to connect this bridge with the existing railway system in Guatemala, so that within a few months it will be possible to travel by rail between two other Latin American capitals, and as this is on the route of the Pan American Railway it will not be long before more capitals in North (Central) America are linked together.

THE TUNNEL THROUGH THE ANDES.

This tunnel on the Transandine Railway connecting Buenos Aires with Valparaiso was officially opened at Caracoles Station on the Chilean side, on April 5, 1910. The trip between these two points can now be made in 38 hours.

Already in South America, besides the instance mentioned, another connection had been made in 1910. Montevideo, the capital of Uruguay, has been brought into touch with Rio de Janeiro, the capital of Brazil, by a somewhat circuitous route perhaps, but one which is altogether by rail. This accomplishment in Latin America has not aroused the interest it deserved, for although there is as yet no saving of time by the trip overland, nevertheless, when the schedule becomes well adjusted and trains are run regularly between the two points the advantage, both scenically and commercially, will be in favor of the land over the ocean route.

These advances in transportation are actual developments of the ambition of all Latin America, which is far-reaching and much nearer solution than the rest of the world realizes. For instance, construction was practically completed on the small interval still remaining to connect Asuncion, in Paraguay, with Buenos Aires, in Argentina.[1] Asuncion is also soon to have an outlet eastward to the Atlantic, as work was inaugurated in 1910 on the direct line between that capital and Sao Francisco, one of the best harbors in Brazil.

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[1] June, 1911. This interval is now completed, and train service has been established between Buenos Aires and Asuncion.

During the year the survey was completed of the railway in Bolivia, which, when finished, will unite La Paz and Buenos Aires, and from Santos, in Brazil, the first rails were laid on a line that will ultimately stretch westward to the capital of Bolivia. In Costa Rica the Pacific Railway was completed (although the formal opening did not take place until 1911), and this made the sixth interoceanic line opened in Latin America. On the Atlantic Ocean a most interesting event was the departure of a steamer, under the flag of the United States, for Buenos Aires, while on the Pacific a new line, under the American flag, was operated north of Panama along the west coast in anticipation of the Panama Canal, and south from that port a new line, under the Peruvian flag, began regular service. Steamship connections to both coasts of South America were improved. Central America was brought much nearer by the schedule of a fast steamer between Salina Cruz, in Mexico, and ports in Salvador. Excursions, also, on special steamers to many ports of Latin America, which promise well as a commercial undertaking, were a gratifying indication of the increasing interest in those parts of the world. It is impossible to realize the rapid advance of the

MEDAL STRUCK BY THE MEXICAN GOVERNMENT IN COMMEMORATION OF THE CENTENNIAL OF ITS INDEPENDENCE.

railway and to appreciate how completely the traditional isolation of the capitals of Latin America is being negatived.

Another sign of the disappearance of the mysterious and of the documentation of the actual, especially noticeable in 1910, is the important number of expeditions projected or already started by the United States scientific bodies into the interior of South America, for the purpose of simple exploration, or of collecting exact data on scientific and commercial conditions. In Panama a biological survey of the Canal Zone is in progress, the result of which will interest students and business men alike. In Venezuela two expeditions, and in Colombia one, began work in 1910. Others, especially those of Prof. Bingham for Peru and Mr. Muir for the Amazon River, were planned during that year, but were not ready until in 1911. In the Lower Amazonian region an expedition from the United States for zoological exploration received the support of the Brazilian Government, and the same Government has agreed to contribute a substantial sum for an extensive trip of investigation through the Republic to be made by the English traveler, Henry Savage Landor. Other expeditions of similar character have been in operation in Central America and Mexico.

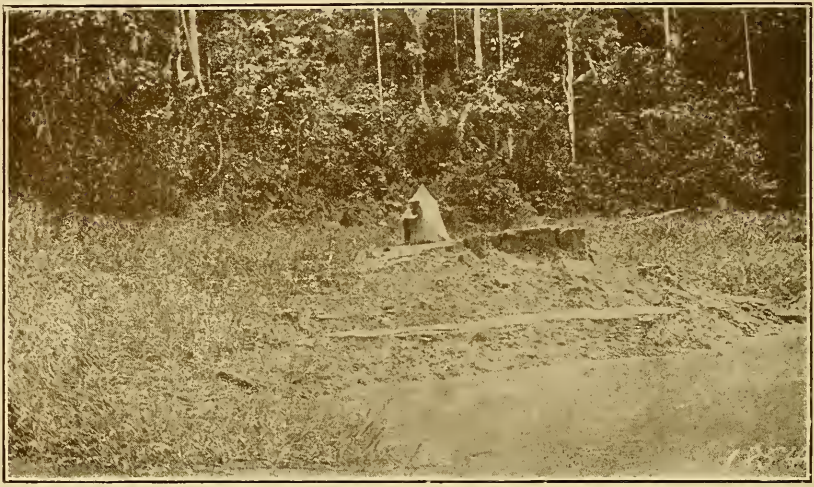
These are indications of the widespread interest shown during the past year in the natural resources of the wide area of Latin America, and commercial ambitions are equally awake to the advantages of better acquaintance with these countries. The Governments themselves are sincerely disposed to encourage closer intimacy, and as one proof of their friendship, it should be noted that in two instances, at least, the differences concerning navigation of internal waterways has been cleared away. Brazil has settled amicably with Uruguay the use of the Jaquarâo River and Merim Lagoon, the waters forming their boundary on the Atlantic coast; and Uruguay and Argentina have likewise settled the use of the waters of the Rio de la Plata, so that these two rivers have become practically international streams.

Several other questions for a long time at issue between Latin-American nations, as that of the boundary between Brazil and Peru, have been solved by treaty, or are by way of solution through arbitration. Peru and Colombia have entered into such treaty, and the Bolivia-Peru dispute has been settled amicably. In fact, the Latin-American Republics have been the first to grasp the benefits of the theory of arbitration, and have shown themselves most consistent in their advocacy of the practice before The Hague Tribunal.

In 1910 Latin America was very active in ratifying or promoting international conventions which will, when made effectual, facilitate international acquaintance and movement, upwards of 20 such documents having been signed during the year. The postal convention between the United States and Uruguay was concluded, and this later Republic had the distinction of being selected as the meeting place for the South American Continental Postal Congress which was held in Montevideo in January, 1911. The result of it will be of far reaching benefit not only to the 10 Republics of South America, but to the entire world.

At international gatherings of various interests and purposes attendance by delegates from Latin-American Republics was noticeable, and their influence was always recognized.

In many unofficial affairs, like the Esperanto Congress in Washington, Latin Americans were likewise active. Among aviators, Santos Dumont, of Brazil, retained the prominent place he won long ago by his enthusiasm and energy. Unhappily, two deaths are to be recorded, Moissant, once a resident of Salvador, having lost his life in a daring flight in the United States, and Jorge Chávez, of Peru, being killed in an equally hazardous attempt to fly across the Alps. The spectacular character of aerial navigation appeals to the ardent nature of the Latin, and meets for the demonstration of the flying machine became very popular in the larger cities of both North and South America. In sports, in art, and in literature the people have been appreciative, one book at least, Chanaan, by a Brazilian author, Greça Aranha, having been pronounced by one of the greatest of European critics to be the most wonderful book of its kind ever produced in America.



MAKING MAGNETIC OBSERVATIONS ON THE BANKS OF THE AMAZON.

Under the direction of Mr. C. C. Stewart, who was sent out by the Carnegie Institution of Washington, magnetic observations were made at numerous points along the Amazon River from Manaos, Brazil, to Iquitos, Peru, and along some of the more important tributaries of the Amazon in Peru.

In science one accomplishment merits notice; that is the observation in the Southern Hemisphere of stars up to the seventh magnitude, a work completed, thanks to the wonderfully clear atmosphere of the eastern slope of the Andes, in 1910. It may be added that this, and a wonderful trip along the source of the Amazon during which valuable data on terrestrial magnetism were gathered, resulted from the activity of the Carnegie Institution of Washington.

Throughout Latin America the year 1910 was eminently prosperous. In the matter of commerce, all reports are satisfactory, and the figures of international trade for the 20 Republics total a higher sum than ever before in their history, not a few of these nations having increased both imports and exports to a really astonishing degree. More interest also has been shown by the outside world in Latin America.

The Columbus Memorial Library of the Pan American Union received during 1910 more literature of a popular and technical character relating to these Republics than ever before. Many books from England, Germany, France, Spain, and Italy have been published on the subject, and the London Times recently issued, to meet the plain demand for current information, a South American Supplement, which should be called the Latin-American Supplement, if the real field of that monthly edition were to be expressed in the title. Great interest was aroused in the proposed exposition to be held in 1915 to celebrate the opening of the Panama Canal,[1] and in many ways organized effort is being directed toward preparation for that event.

GOLD MEDAL PRESENTED TO PROF. R. H. TUCKER FOR HIS EFFICIENT WORK AT THE SAN LUIS OBSERVATORY, AT SAN LUIS, ARGENTINE REPUBLIC.

The number 87,000 which appears on the medal represents the number of observations taken between 1908 and 1911.

Important international meetings bearing upon American matters took place in various parts of the Americas during 1910.

The Fourth Sanitary Conference was held in San Jose de Costa Rica, commencing December 25, 1909, and extending its sessions into the first days of January. The Second Central American Conference met in the city of San Salvador, February 1 to 5. They discussed questions of practical bearing upon the members of the International Union of American Republics, and all have been fully reported in the Monthly Bulletin of the Pan American Union.

The Fourth Pan American Conference was held in Buenos Aires between July 12 and August 25. Its transactions were fully reported in the Bulletin (November, 1910, pp. 793–818), but a few of the notable activities should be mentioned. The name of "The Pan American Union" was adopted in place of "The International Bureau of the American Republics;" the director became director general, and the secretary assistant director. The scope and purpose of the Pan American Union were extended; resolutions encouraging the Pan American Railway, patent and trade-mark laws, uniform consular invoices, arbitration, exchange of professors between universities in the various Republics, among numerous conventions, were passed.

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[1] The Congress of the United States early in 1911 approved the plans offered by the city of San Francisco, California, for this international exposition. San Diego, California, has decided to hold an independent exposition, in no sense antagonistic to that of San Francisco, with the intention of establishing a permanent record of several of the intimate phases of historical and noncommercial relationship between the United States and Latin America.

A great feature of the conference was the award of a medal to Mr. Carnegie as the benefactor of humanity—a spontaneous tribute of gratitude for his work from the 160,000,000 people it has benefited.[1]

THE "CARNEGIE" MAGNETIC STATION AT FREITAS BEACH, RIO DE JANEIRO, BRAZIL.

The nonmagnetic yacht "Carnegie," on which the expedition under Mr. Stewart traveled, called, in the course of her navigation cruise, at the ports of Para and Rio de Janeiro, Brazil; Montevideo, Uruguay; and Buenos Aires, Argentina. Observations were carried out in connection with the observatories at Rio de Janeiro and at Pillar, Cordoba, and other points.

The sad death of President Obaldia, of Panama, as well as that of President Montt, of Chile, in Bremen, Germany, followed by that of his successor, must be recorded in 1910, and the disastrous earthquake in Costa Rica, nearly ruined the city of Cartago and did entirely destroy the Palace of Justice erected by the generosity of Mr. Carnegie. (This is to be built again in San Jose.) These are the only dark clouds on an otherwise peaceful and progressive year. Politically, disturbances occurred in some of the Republics, and conditions existing at the beginning of the year were changed by violence. Nevertheless, the second decade of the twentieth century was ushered in for Latin America with a decided step in advance for all sections of that area.

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[1] This medal was presented to Mr. Carnegie in the assembly hall of the Pan American Union, in Washington, on May 5, 1911. A report of the event appeared in the Bulletin for May, 1911, p. 837.

ARGENTINE REPUBLIC

The Argentine Republic is the third largest of the American Republics. It has an area of 1,139,979 square miles, equal to about two-fifths the total area of the United States of America without Alaska, and a population (1910 estimated) of 6,989,023, or 6.1 per square mile. The country presents a variety of climate and products, ranging from tropical in the north to arctic in the south. The greater part, lying in the Temperate Zone, consists of fertile plains which offer excellent pasturage for millions of cattle. Nearly all cereals, especially wheat, corn, and oats, as well as linseed and alfalfa, are successfully cultivated. Sugar, cotton, tobacco, and grapes are likewise grown, but mostly for home consumption. Large quantities of frozen meat, hides, and skins are exported. The principal product of the forest is quebracho extract, used for tanning. The mountains contain deposits of silver, copper, and gold, and oil has been found in paying quantities.

COAT OF ARMS OF THE ARGENTINE REPUBLIC.

The Argentine nation is a federal union of states (Provinces). The constitution adopted September 25, 1860, provides for three branches of government—the legislative, executive, and judicial. The legislative power, the National Congress, consists of the Senate and the Chamber of Deputies, the former with 30 members and the latter with 120. It meets regularly every year in the capital, Buenos Aires, from May 1 to September 30, but the sessions may be extended or an extraordinary session called by the President. Senators are elected for nine years by the legislatures of the Provinces, and, in the federal district, by a special body of electors, two Senators being elected for each Province and two for the federal district. The Senate is renewed by thirds every three years. Deputies are elected by direct popular vote for a term of four years, in the proportion of 1 for every 33,000 inhabitants. The Chamber of Deputies is renewed by halves every two years. Suffrage is free to citizens 18 years of age who are registered and have no legal incapacity.

The President, assisted by a cabinet of eight ministers, exercises the executive authority. His annual salary is 72,000 pesos paper ($31,680). The President and Vice President are elected indirectly for a term of six years by electors chosen by the people. Neither may be elected for a second term immediately following their incumbency of the office. The President and cabinet are as follows:

President, Dr. Roque Saenz Peña (inaugurated October 12, 1910); Vice President, Dr. Victorino de la Plaza; minister of the interior, Dr. Indalecio Gómez; minister of foreign affairs, Dr. Ernesto Bosch; minister of the treasury, Dr. José Ma. Rosa; minister of justice, worship, and public instruction, Dr. Juan M. Garro; minister of war, Gral. Gregorio Vélez; minister of navy, Rear-Admiral Pablo Saenz Valiente; minister of agriculture, Sr. Don Eliodoro Lobos; minister of public works, Dr. Ezequiel Ramos Mexía.

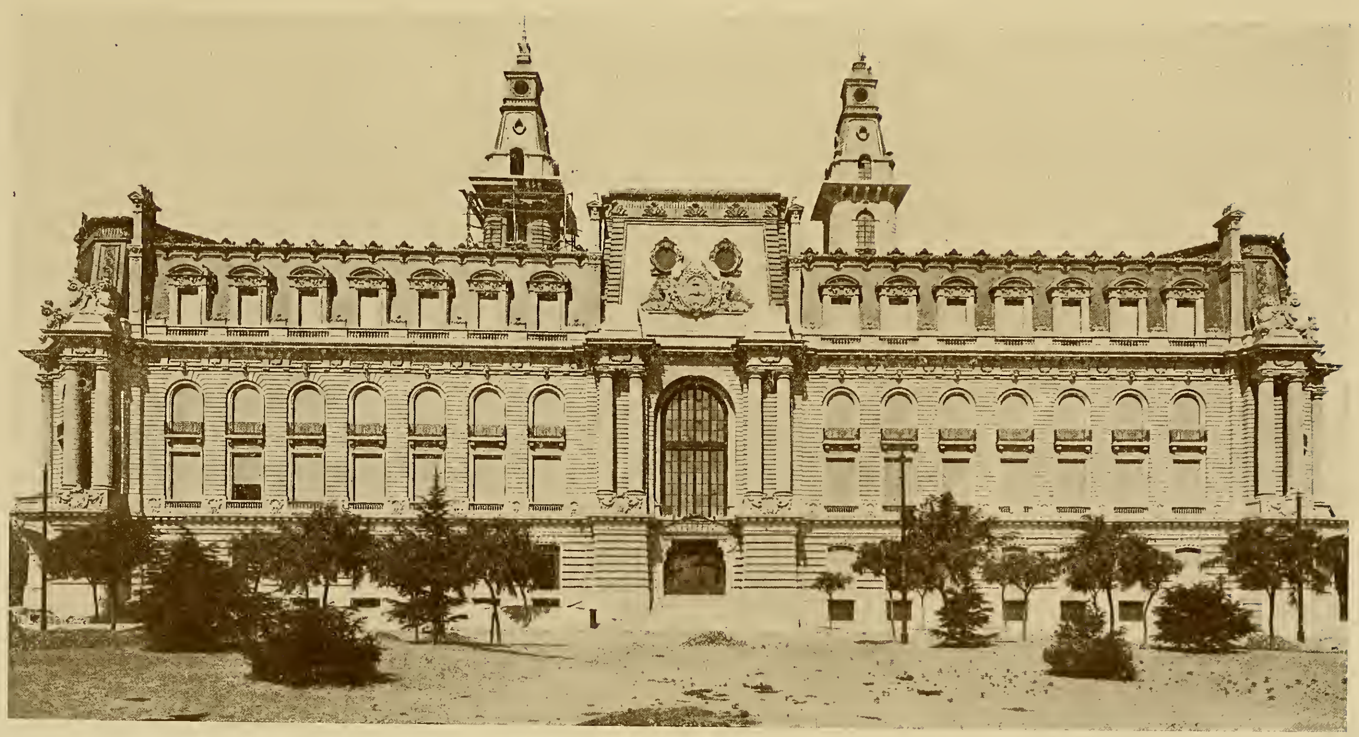
Although the ministers are appointed by and responsible to the President, they are also responsible to Congress for their administrative acts, separately and as members of the cabinet, and may at any time be forced to resign by a vote of censure or lack of confidence.

The department of the interior (Ministerio del Interior) controls the post offices, the national telegraphs, the police and fire departments of the federal capital, the national territories, and the national hygiene. The department is also equipped with a bureau of labor, the director of which aims to settle disputes between capital and labor, compile labor statistics, and propose such laws as may be beneficial to labor. It can also intervene in any of the Provinces when conditions may warrant it and administer said Province until law and order are restored.

PRESIDENT ROQUE SAENZ PEÑA.

The department of foreign affairs and worship (Ministerio de Relaciones Exteriores y Culto) is divided into two sections, as its name would indicate. The diplomatic and consular corps, as well as the various international boundary commissions, and similar matters come under the first section, while the second has supervision over the affairs of the Roman Catholic Church, that faith being the official religion of the country, although there is complete religious tolerance, and churches of many other denominations exist. Each of these sections is administered by an assistant secretary. This department also controls the hospitals and charitable institutions, the national lottery, and the "Sociedad de Beneficencia de la Capital," a charitable society organized and maintained by the ladies of Buenos Aires and which receives a large percentage of the proceeds of the lottery.

The treasury department (Ministerio de Hacienda) has charge of the finances of the country and attends to the collection of customs duties, internal revenue, territorial contributions, stamp taxes, etc., and the necessary disbursements, and the service of the public debt. The "Caja de Conversion" (conversion office), having charge of the maintenance of the relation between gold and paper and vice versa, is also under this department; also the archives of the nation, the national bureau of statistics, the national chemical office (where



MAGNIFICENT NEW CUSTOMHOUSE AT BUENOS AIRES ERECTED AT A COST OF APPROXIMATELY $2,000,000.

The fourteen front windows are significant of the fourteen Provinces in the Republic. The total foreign trade of the country for the year 1910 amounted to 724,396,711 pesos gold, equivalent to $702,664,810 United States gold.

all foodstuffs are analyzed in compliance with the Argentine pure-food law), the customhouses, ports, and national and private banks.

The department of justice and public instruction (Ministerio de Justicia é Instrucción Pública) is also divided into two sections, each under the supervision of an assistant secretary. The first section has charge of the administration of justice throughout the nation, and the second controls the educational system of the Republic. The schools in the Provinces are under the direct supervision of this department, while those of the federal capital and the national territories are under the national council of education, which is likewise responsible to the minister. The department also has charge of the public libraries, the various museums, the Academy of Fine Arts, and other similar institutions. It publishes the official papers, containing all laws, decrees, etc., and controls the register of titles and deeds, in which all real estate sales and transfers are recorded.

The war department (Ministerio de Guerra) has charge of the affairs of the regular army and those of the reserves. A well-equipped military training school, military hospital, chemical laboratory, and a large ranch for breeding cavalry horses are dependencies of this department.

The navy department (Ministerio de Marina) is intrusted with all matters pertaining to the development of the navy. Under its control are a naval academy, a school for mechanics and marines, a large dry dock at Buenos Aires, repair shops, etc., while the prefect of the port, with his numerous subordinate officers, is likewise responsible to the minister.

The department of agriculture (Ministerio de Agricultura), with divisions of rural statistics and economy; agronomy; zoology and veterinary police; mines; geology and hydrology; commerce and industries; land, colonies and immigration; and the meteorological office, performs a vast amount of beneficial work and issues numerous publications. It maintains nine experimental farms, schools for viticulture, agriculture and aboriculture, and a chemical laboratory.

The department of public works (Ministerio de Obras Públicas) supervises the public works of the Republic through its various divisions, such as roads and bridges; sanitary works; sewers, waterworks, etc.; architectural works; and that of means of communication, the last named having control over the railways, both Government and private.

The federal judiciary is composed of a supreme court, four courts of appeal, and courts of first instance. The supreme court is composed of five judges, and the courts of appeal of three judges each, appointed by the President to hold office during good behavior. Each Province has its own judiciary.

The active army consists of about 20,000 men. There is a reserve numbering about 150,000, compulsory service being required for either the army or navy. The navy has over 30 vessels, with a personnel of about 5,500. The naval reserve force is composed of some 25,000 men.

There are 2,027 post offices, with telegraph stations installed in 628 of these. During the year 1910 the telegraph lines were increased to 25,602 kilometers.

The Republic is divided into 14 Provinces, 10 Territories, and 1 Federal District, each Province having its own interior government, and the Territories being under the supervision of governors appointed by the President. The Federal District is administered by an intendente, or mayor, appointed by the President, assisted by a municipal council elected by the people.

ARGENTINA IN 1910.

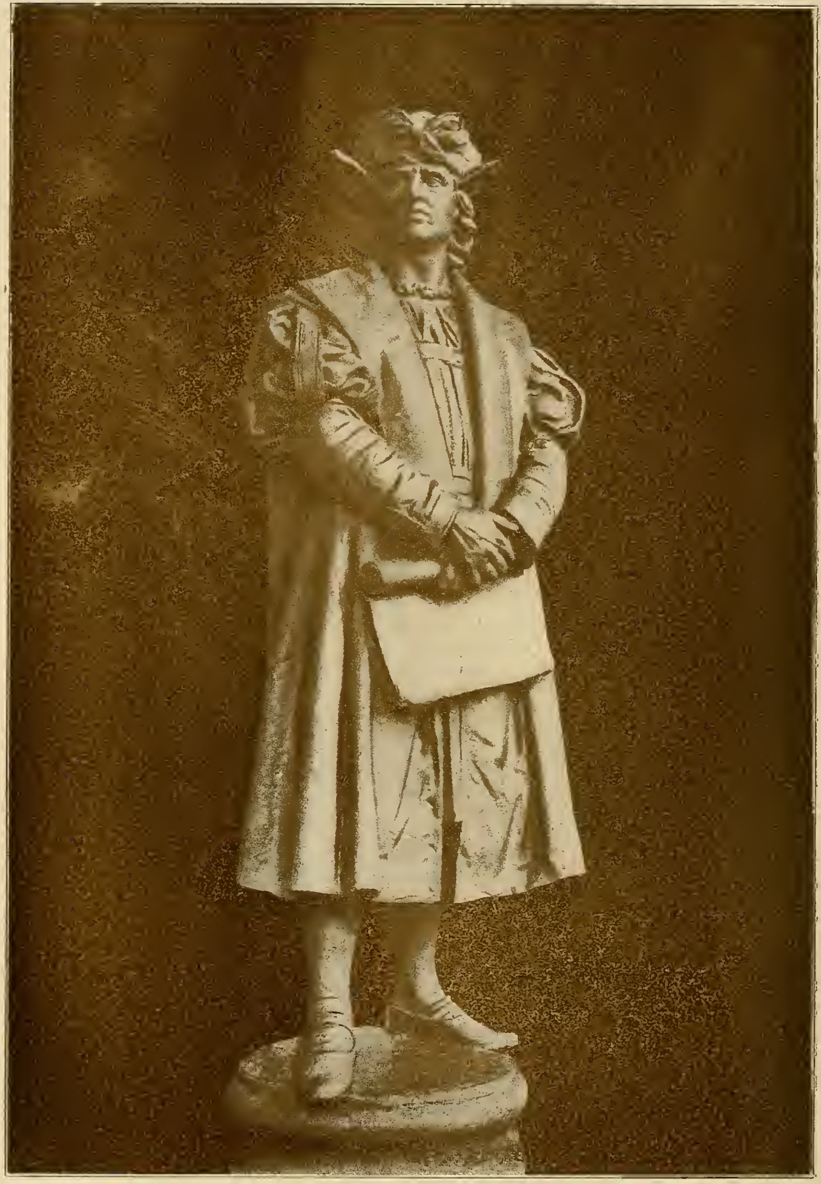
This year was marked by the celebration of the centennial anniversary of the declaration of independence, and the Republic had cause for rejoicing in more ways than one. Peace ruled in the diplomatic relations of Argentina with all the world, for questions with Uruguay, Brazil, and Bolivia, which were unsettled when the new year dawned, were satisfactorily solved before it closed. Harmony and friendship were therefore the controlling notes at the conclusion of the century.

The most important event of the year, from a national standpoint, was the formal centenary celebration, the anniversary day being May 25. Special delegates from America, Europe, and the East were present to congratulate the Republic on the well-recognized success, and the festivities, covering one entire month, were a marvel of beauty and enterprise to them, to the Argentine people themselves, and to the many visitors from abroad who had come to see at first hand the conditions of the country.

The opening in the early part of the year of the tunnel through the Andes to connect by rail Buenos Aires on the Atlantic side of South America with Valparaiso on the Pacific side, thus offering continuous rail transportation throughout the year and doing away with the awkward animal passage of the higher pass, was a fitting material demonstration of the progress of railway building in South America. The Railway and Land Transport Exhibition in Buenos Aires, which closed its six months' session on January 2, 1911, was another proof of accomplishment, and it is said to have been the cause of the sales in the Republic of about $2,000,000 of supplies.

Another notable feature of the year was the Fourth Pan American Conference held in Buenos Aires during the months of July and August. As an international meeting it was of direct significance to all the American Republics.

A presidential election took place in Argentina during March, and the results were very satisfactory to the people. Dr. Saenz Peña



THE COLUMBUS STATUE IN BUENOS AIRES.

During the centennial celebration in Argentina in 1910, many permanent monuments were erected in commemoration of the Republic's 100 years of independence. The colonies from several foreign countries added to those monuments others of their own as tokens of gratitude to their adopted country. The Italian residents selected a statue of Christopher Columbus as most suitable, and this they recently presented to the municipality of Buenos Aires. It is 6.25 meters (about 22 feet) high, and stands on an elevated pedestal artistically proportioned to the statue itself.

was elected President, and Dr. Victorino de la Plaza Vice President. They took the oath of office October 12, and with their well-known energy and devotion to the nation the prosperity of the country for the next six years would seem assured.

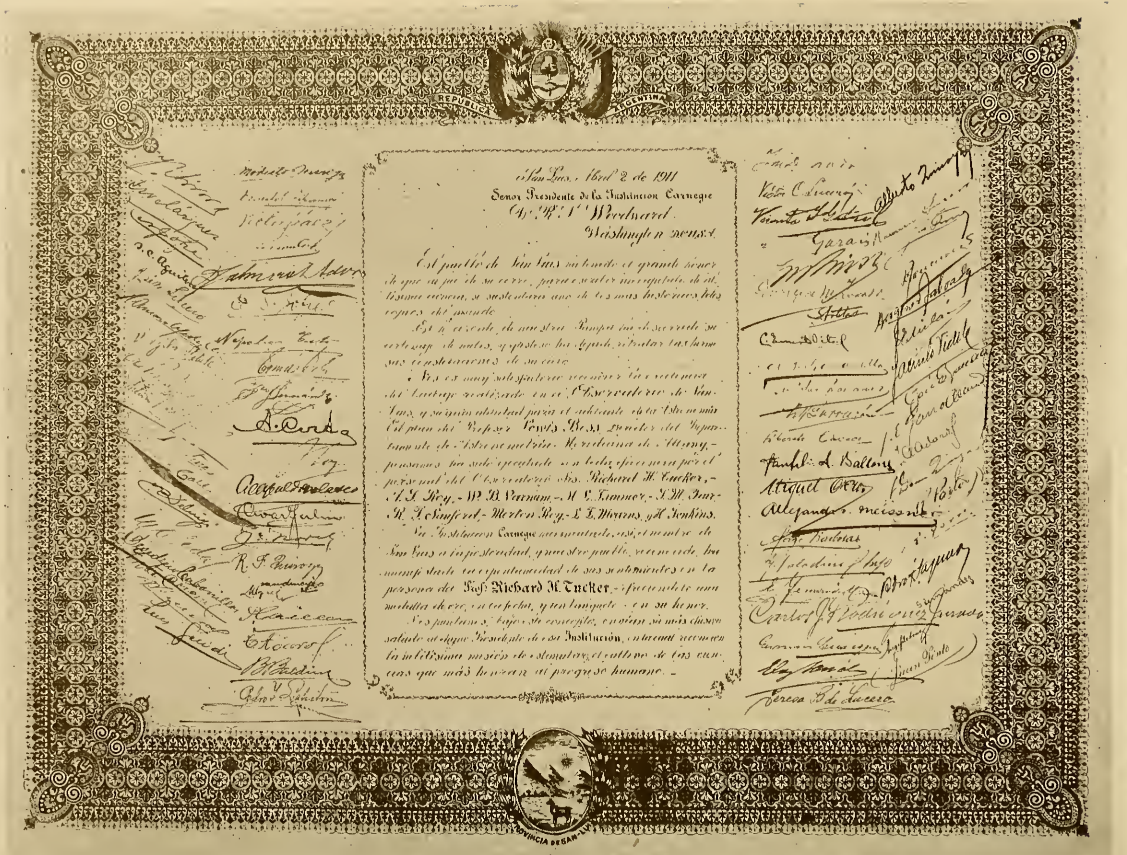
Financially the country is secure, for the revenue steadily increases and for the last two preceding years has exceeded the expenditure. Extraordinary expenses were incurred during 1910, partly to meet the demands of the centennial celebration and partly to advance the numerous public works which have been demanded by the increasing industrial expansion in all directions. Importations show an increase, but exportations show a decrease, which on the whole is not unfavorable, because, while smaller exports appear on the balances, as a matter of fact higher prices ruled for what was sent abroad, and therefore the producer gained by higher returns for what he sold.

The extraordinary expenses mentioned refer chiefly to the vast program of public works actually in execution. These include the port works, which are to be so enlarged that vessels of heavy draft can approach actually to the docks of Buenos Aires; to the care necessary to keep free way in the Parana, Uruguay, and Paraguay Rivers; to the enormous developments produced by irrigation in the Provinces of Tucuman and Mendoza; to the new public buildings required for the national congress, for the customhouse of the capital, for the palace of justice, and for the amplification of the railway system, which in the opportunity offered thereby for agricultural and industrial activity will bring back to the people far more than its present cost to the nation.

Agriculturally there was reason for some congratulation, but also for some regret. The area of land under cultivation has increased during the year, but the total crops were shorter than in 1909. Oats produced more; wheat, linseed, and corn less, but in the export of maize and linseed Argentina still stands first, while Russia is the only country having the advantage in the export of wheat. As far as cattle are concerned, while the industry suffered from drought, especially in the south, conditions at the end of the year improved so that exports were 13 per cent above those of 1909. Frozen meat has reached new markets, and live animals have been admitted where once they were prohibited.

The immigration into Argentina during the year was 289,640, but excluding the number leaving the country for the same period, the net gain for the year was 191,786. This is above the average for the past 10 years, the total number being 1,848,954. The department of agriculture is doing everything possible to promote and judiciously regulate immigration, so that in all probability the future will see even larger numbers coming to the Republic for home making.

The bureau of commerce and industry has issued the industrial census of the nation in 1910, showing that there are in operation



San Luis, Abril 2 de 1911
Señor Presidente de la Institucion Carnegie
Dr. R. S. Woodward.
Washington D.C.U.S.A.

TESTIMONIAL ACCOMPANYING MEDAL PRESENTED BY THE PEOPLE OF SAN LUIS, ARGENTINA, TO PROF. R. H. TUCKER, OF THE CARNEGIE INSTITUTION.

[Translation.]

SAN LUIS, *April 2, 1911.*

THE PRESIDENT OF THE CARNEGIE
INSTITUTION, DR. R. S. WOODWARD,
Washington, D. C., U. S. A.:

The city of San Luis has been honored by the installation, at the foot of its mountains, of one of the historical telescopes of the world, for the purpose of recording a chapter in advanced science. The horizon of our pampa, parting its curtain of clouds, has freely allowed to be pictured the beautiful constellations of its sky.

It is most satisfactory to us to recognize the excellence of the work done at the Observatory of San Luis, and its great usefulness for the advancement of astronomy.

The plan of Prof. Boss, of Albany, Director of the Department of Meridian Astrometry, has been executed with complete efficiency by the staff of the Observatory: Messrs. R. H. Tucker, A. J. Roy, W. B. Varnum, M. L. Zimmer, R. F. Sanford, P. T. Delavan, J. M. Fair, M. I. Roy, L. Z. Mearns, and H. Jenkins.

The Carnegie Institution has in this manner linked the name of San Luis with posterity, and our people, thus distinguished, have expressed their spontaneous feelings toward Prof. R. H Tucker, by offering him a gold medal and a public banquet on this occasion.

The natives of San Luis, with these sentiments, send their most cordial greeting to the honored president of that institution, recognizing its noble mission of stimulating the cultivation of the sciences which most honor the progress of humanity.

31,988 industrial establishments, with a capital of $727,591,135 and a productive output amounting to $1,227,549,196. They altogether employ about 330,000 people.

As adding to the knowledge which the Government wishes to spread concerning agricultural conditions in the Republic, the agricultural exposition held in Buenos Aires from May 25 to October 1 was of great value. The display of cattle, sheep, and horses was of unusual high grade, and the exhibits of machinery used on the farms for the economic harvesting of crops showed how advanced the country has become in such matters. The demonstration proved that the present fame of the country was due to the success of its agriculturists.

The educational census of the Republic shows that there are 5,321 primary schools, with 18,571 teachers and 614,680 pupils, and for secondary instruction 26 higher schools, with 812 teachers, these being preparatory for the three universities. Besides these, six commercial high schools, 42 normal schools, and various institutions for special instruction form the educational institutions, for which the Government expends about $3,500,000 annually.

FINANCE.

The total receipts of the Government for the year 1910, according to the Anuario Financiero of January, 1911, were 85,842,460 pesos gold and 109,914,147 pesos paper. Reducing the paper to its gold equivalent on the basis of 1 peso paper equal to 44 centavos gold, the total receipts of the Government for 1910 were 134,204,685 pesos gold. The equivalent in United States gold, reckoning the Argentine gold peso at $0.97, is $130,178,544.

The gold receipts exceed the estimates for the year (70,291,661 pesos) by 15,550,799, and the paper receipts exceeded the estimates (105,729,318 pesos) by 4,184,829 pesos. This excess of actual receipts over estimates was due in a large part to increased importations of foreign goods.

The following were among the principal sources of revenue collectible in paper:

Direct taxes, licenses, and stamped paper.

		Pesos paper.
Direct taxation (contribución territorial):		
In Buenos Aires	11,561,769	
Territorial tax	1,247,854	
		12,809,623
Licenses		5,572,872
Stamped paper		14,067,528
Total		32,450,023

These items show an increase over the corresponding items of the preceding year of 2,837,968 pesos paper.

Internal taxes.

	Pesos paper.		Pesos paper.
Alcohol and spirit tax	16,703,394	Wines and artificial drinks	166,873
Tobacco tax	23,322,573	Patent medicines and perfumery	1,592,319
Match tax	3,451,716	Miscellaneous	220,294
Malt-liquor tax	4,076,697		
Insurance tax	844,815	Total	50,610,289
Playing-card tax	231,608		

The estimated receipts for internal taxes were 46,600,000 pesos paper, so that the actual receipts exceeded the estimates more than 4,000,000 pesos paper.

GOLD RECEIPTS.

The customs receipts from imports and exports and from warehouse, port, and other dues, according to the official publication issued by the general statistical office for 1910, amounted to 82,902,746 pesos gold, and 1,796,296 pesos paper. This exceeded the corresponding collections for the preceding year by 10,167,268 pesos gold, and 160,617 pesos paper.

The customs receipts from import duties amounted to 76,033,647 pesos gold, and from export duties 3,902 pesos gold. The receipts from all other sources in connection with importation and exportation amounted to 6,865,197 pesos gold, and 1,796,296 pesos paper. The principal items of these charges were as follows:

	Pesos gold, 1910.	Pesos paper, 1910.		Pesos gold, 1910.	Pesos paper, 1910.
Warehouse and lighterage	2,707,318	120,271	Derricks and cranes	625,510	44,615
Port leases	91,496	105,572	Port charges	901,983	1,148
Miscellaneous	52,056	350,791	Stamps and statistics	559,367	83,645
Lighthouses and appraisements	479,153	16,962	Traction service in the port	....	1,059,666
Wharfage	1,273,593	5,123			

The receipts from import duties collected in 1910 exceeded the receipts for the preceding year by 9,743,210 pesos gold, and from other sources connected therewith by 424,507 pesos gold and 160,617 pesos paper. The receipts from the export tax showed a falling off of 449 pesos gold.

EXPENDITURES.

There has been as yet no published statement covering the expenditures for the year 1910. All the information at present available is contained in the message of President Saenz Peña, of May 12, 1911, that—

> The ordinary revenues were estimated at 265,489,094 pesos paper. The actual receipts exceeded this sum by 39,208,106 pesos paper. The extraordinary expendi-

tures, 144,000,000 pesos paper, were met or offset in several ways—among others the surplus of ordinary revenue over the budget estimate; the amount received on account of the loan in furtherance of laws No. 6,300 and 7,038; the irrigation fund; and the proceeds from the liquidation of the national bank.

The excess of receipts over estimates as given by the president very nearly corresponds with the figures given in the Anuario Financiero, which were 15,550,799 pesos gold, and 4,184,829 pesos paper, equivalent to a total of 39,527,554 pesos paper. The amount of the ordinary revenue, as indicated by the president's statement, is 304,679,200 pesos paper. The figure given in the Anuario Financiero is 85,842,460 pesos gold and 109,914,147 pesos paper, together equivalent to 300,465,192 pesos paper. The difference is no doubt due to the fact that in the larger sum is included some items not included in the lesser.

In 1908 there was a surplus of receipts over expenditures of about $2,400,000. This is the only surplus which has occurred for a number of years. The deficit for 1909 was about $50,000,000, of which the major part was on account of extraordinary expenditures for internal improvements. It seems probable from all the available information at hand that there was a deficit in 1910, but one by no means so great as that of the preceding year.

The extraordinary progress made in Argentina and the large increase from year to year in the governmental receipts is responsible for the increased expenditures, nearly all of which have been devoted to internal improvements. However, President Saenz Peña in his message clearly indicates that it is necessary for the Government to allow itself to catch up, and that the constant increase of the debt from year to year through deficits is an economic evil.

The ordinary revenues of Argentina have increased in the last six years by 111,817,074 pesos paper, as is shown by the following table:

	Pesos paper.		Pesos paper.
1904	188, 648, 118	1908	254, 232, 013
1905	205, 341, 838	1909	274, 526, 578
1906	229, 111, 086	1910	300, 465, 192
1907	243, 808, 347		

PUBLIC DEBT.

In his message President Saenz Peña says:

For the purpose of meeting the extraordinary expenses, paying the coupons of January 1, and to be safe in any event, it was necessary last December to negotiate an advance for two years of 20,000,000 pesos gold, with a syndicate formed by the Messrs. Baring. During the year 1910 there was liquidated 5,500,000 pesos gold, of the foreign debt, and issued half a million. It remains, therefore, reduced to 306,500,000 pesos gold.

In respect to the internal debt, in compliance with the provisions of laws 6300 and 7038 in regard to the acquisition of the Cordoba and Northwestern Railroad, the purchase abroad of material for the protection of agriculture, and after providing for the proper liquidations, its circulation at the end of 1910 amounted to 92,500,000 pesos gold, and 121,000,000 pesos paper.

The figures of the public debt as published in the Anuario Financiero for the last five years are as follows:

Year.	Foreign.	Internal.	
	Pesos gold.	*Pesos gold.*	*Pesos paper.*
1906	324,333,116	38,629,600	88,243,800
1907	319,512,105	38,629,600	98,502,240
1908	314,743,909	38,198,800	104,540,700
1909	311,513,829	87,483,900	115,245,300
1910	308,554,074	92,536,900	121,534,230

The payments on account of the debt are as follows:

Year.	Foreign.	Internal.	
	Pesos gold.	*Pesos gold.*	*Pesos paper.*
1906	4,834,825	68,500	942,800
1907	4,821,010	....	1,681,300
1908	5,049,666	430,800	1,206,500
1909	5,129,544	744,900	1,295,400
1910	5,200,000	995,000	1,320,000

The increases of the debt are as follows:

Year.	Foreign.	Internal.	
	Pesos gold.	*Pesos gold.*	*Pesos paper.*
1906	....	....	1,002,900
1907	....	35,000,000	11,939,040
1908	281,469	....	7,244,960
1909	1,899,464	50,000,000	12,000,000
1910	2,240,245	6,048,000	7,608,930

COMMERCE.

The total foreign trade for the year 1910, compiled from official Argentine reports except as stated, was 724,396,711 pesos gold, represented by imports to the value of 351,770,656 pesos, and exports of 372,626,055 pesos.

The trade for the year 1909 was 700,106,623 pesos gold, of which sum 302,756,095 pesos represented imports and 397,350,528 pesos exports. There was, therefore, for the year 1910 an increase over the preceding year in the importation of foreign goods of 49,014,561 pesos and a decrease in the exportation to foreign countries of 24,724,473 pesos, showing a net increase in the year's trade of 24,290,088 pesos.

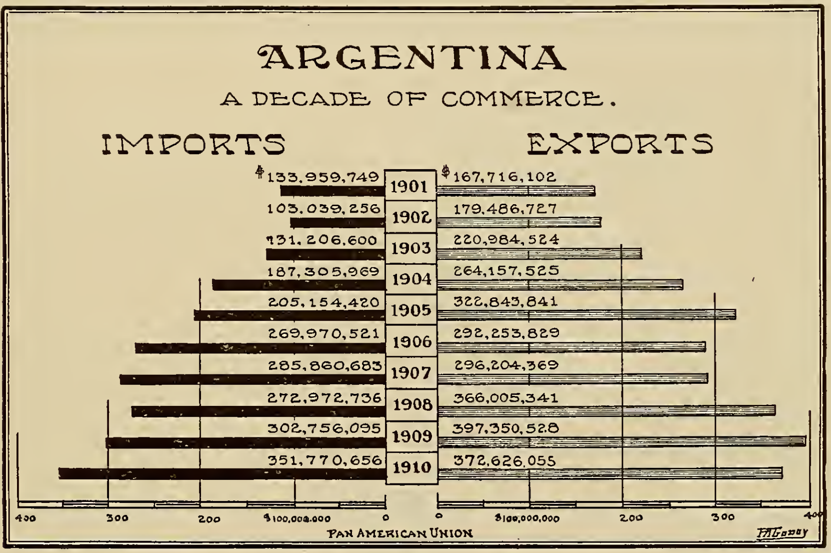
The balance of foreign trade in favor of the Republic for the year 1910 was 20,855,399 pesos, a decrease in the balance as compared with the preceding year of 73,739,034 pesos, the balance for 1909 being 94,594,433 pesos.

The Argentine gold peso is commercially at a discount of about 3 per cent as compared with the United States gold dollar. This would give a value of $702,664,810 or the foreign trade of Argentina expressed in terms of United States gold, the value of the imports being $341,217,536 and of the exports $361,447,274, and the balance of trade $20,229,399.

IMPORTS.

The imports, by principal countries of origin, were as follows:

Countries.	1908	1909	1910
	Pesos.	*Pesos.*	*Pesos.*
United Kingdom	93,371,396	99,198,269	109,377,394
Germany	37,847,076	44,555,770	61,128,888
United States	35,597,004	43,068,829	48,418,892
France	26,476,917	30,801,132	33,650,640
Italy	24,913,248	26,868,106	31,776,115
Belgium	12,753,373	13,570,074	19,598,982
Spain	8,618,110	9,326,671	10,910,910
Brazil	7,285,946	8,177,805	9,103,594
British Possessions	6,150,174	6,037,304	5,950,806
Austria-Hungary	3,293,500	2,966,802	3,466,115
Canada	1,806,661	1,891,530	2,577,506
Switzerland	1,952,378	2,568,763	2,521,594
Netherlands	2,030,030	2,211,110	2,517,189
Uruguay	2,207,038	2,496,611	2,262,394
Paraguay	1,509,955	1,660,174	1,554,777
Sweden	799,916	850,132	1,201,049
Norway	530,780	905,483	1,012,719
Cuba	680,685	648,491	850,711
Japan	572,990	304,270	763,365
China	487,237	589,833	527,536
Russia	1,307,331	739,915	484,403
Chile	726,989	452,681	481,549
Peru	34,552	511,440	462.990



Values shown in the Argentine gold peso, which is commercially at a discount of about 3 per cent as compared with the United States gold dollar.

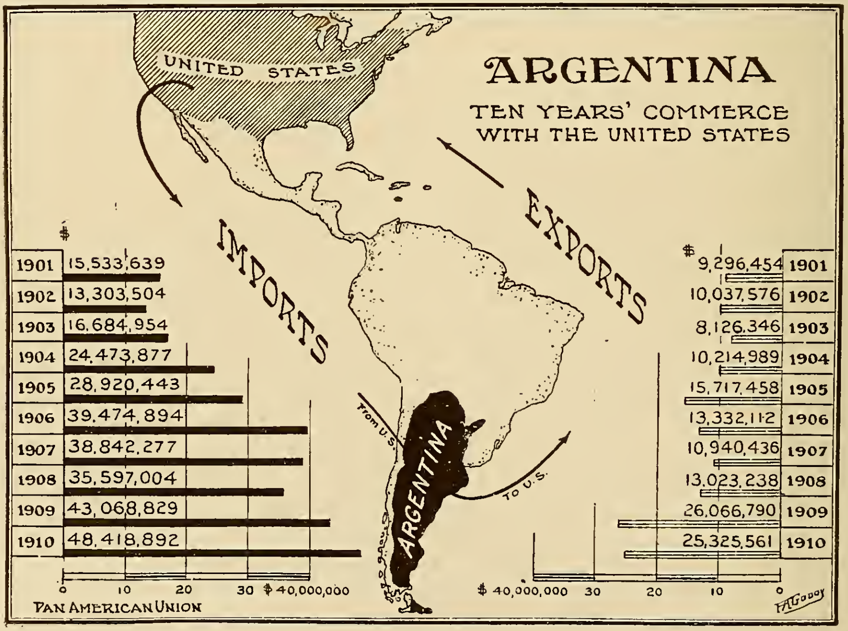
There was no change in the relative standing of the principal countries for the last two years, but there were changes, some of them important, in the relative percentage of the trade, as shown by the following table:

Countries.	1909	1910
	Per ct.	*Per ct.*
United Kingdom	32.8	31.1
Germany	14.7	17.4
United States	14.2	13.8
France	10.2	9.6
Italy	8.9	9.0
Belgium	4.5	5.6
Spain	3.1	3.1
Brazil	2.7	2.6

It will be seen that substantial gains in percentage were made by Germany and Belgium, and these gains were at the expense of the United Kingdom, the United States, and France. This is a reversal of the status of the preceding year, when the gain of the United States in percentage exceeded any of the other leading countries.

The imports under 19 major classifications for the last two years are as follows:

Classification.	1909	1910
	Pesos.	*Pesos.*
Live animals	1,545,853	964,442
Food products	23,014,691	27,141,259
Tobacco	6,201,028	6,081,719
Wines, liquors, and other beverages	13,410,486	14,951,151
Textiles and manufactures thereof	59,923,699	68,365,167
Oils, greases, etc	11,852,943	13,892,439
Chemical and pharmaceutical products	10,203,393	12,289,907
Paints, dyes, etc	1,997,105	2,305,042
Timber, woods, straw, and manufactures thereof	7,639,715	8,670,726
Paper and manufactures thereof	6,638,359	8,307,701
Hides, skins, and manufactures	2,581,165	3,075,615
Iron, steel, and manufactures	36,575,232	43,119,488
Other metals and manufactures	10,210,824	12,870,455
Agricultural implements and machinery	16,651,610	18,921,823
Railway cars, equipment, rails, etc.; carriages, wagons, automobiles, bicycles, etc	31,711,285	35,095,183
Earths, stones, coal, etc	21,758,269	30,925,510
Building materials	28,365,889	29,237,334
Electrical apparatus	4,216,914	5,741,530
Miscellaneous	8,257,635	9,814,165
Total	302,756,095	351,770,656



FOOD PRODUCTS.

Under the general heading "Food products" there were imported products of animal origin to the amount of 5,046,871 pesos. The largest single item was cheese, 1,730,189 pesos. The great bulk of this importation—about 70 per cent of the whole—comes from Italy and most of the remainder from Switzerland and the Netherlands.

The value of sardines imported was 938,957 pesos, nearly all of which came from Spain, but a small quantity from France, Portugal, and other countries. The importation of codfish amounted to 603,231 pesos. Of the shredded codfish, valued at 86,813 pesos, more than half came from Norway and practically all the remainder from Germany and the United Kingdom. Of the whole importation of codfish, amounting to 516,418 pesos, about half came from Norway, and practically all the remainder from the United Kingdom and Germany in the order given. The imports of canned fish aggregated 510,009 pesos, the bulk of which was from Spain and Italy, with lesser amounts from the United States, France, the United Kingdom, and Canada in the order given. Hams were imported to the value of 301,544 pesos, most of which came from the United Kingdom. The importation of eggs was valued at 254,854 pesos and came from Uruguay and Italy.

Under the subhead "Fruits," amounting in all to 1,914,448 pesos, the principal items were olives, valued at 347,916 pesos, the greater part of which was from Spain; walnuts, valued at 227,098 pesos, nearly all from Chile; dried figs, 101,682 pesos, most of which were from Italy; bananas, 95,377 pesos, nearly all from Brazil.

The importation of spices and condiments for the year was 5,606,643 pesos. The principal items were sugar, refined, 1,818,812 pesos, and unrefined, 2,045,268 pesos. The refined sugar came principally from France and Austria, although there was some importation from Germany. The unrefined sugar was from Brazil and Germany. Tomato catsup was imported to the amount of 494,755 pesos, nearly all of which came from Italy. The total imports of pepper were valued at 301,081 pesos. Nearly all of the red pepper came from Spain, while the black pepper was from Italy, Germany, the United Kingdom, the British possessions, and the Netherlands. The imports of garlic and onions amounted to 151,893 pesos.

Grain and vegetables were imported to the amount of 4,819,925 pesos. The principal grain imports were rice, 2,777,114 pesos. The great bulk of rice came from Italy, with smaller quantities from the British possessions and the United Kingdom. The importation of malt amounted to 918,450 pesos, the bulk from Austria. Canned vegetables were imported to the value of 241,346 pesos, and came from Belgium, France, Italy, Spain, Switzerland, and other European countries.

The importation of yerba maté was 5,359,976 pesos, nearly nine-tenths of which from Brazil, and the remainder from Paraguay. Nearly all the imports of coffee, valued at 1,465,263 pesos, were from Brazil. Tea was imported to the amount of 1,021,987 pesos, nearly one-half from China and the remainder from the United Kingdom and the British possessions. The imports of chocolate were valued at 467,668 pesos, most of which came from France, but there was some importation of powdered chocolate, or cocoa, from the United Kingdom and the Netherlands. Candies, sweetmeats, macaroni, biscuits, etc., were imported to the value of 1,149,681 pesos. The candies and sweetmeats came principally from France, the United Kingdom, Switzerland, and Austria-Hungary, macaroni from Italy, and biscuits from the United Kingdom.

TOBACCO.

The importation of tobacco amounted to 6,081,719 pesos. The value of cigars imported was 1,707,611 pesos, of which 188,550 pesos were Cuban cigars. The bulk of the cheaper cigars were from Italy, with some importation from Switzerland, the Netherlands, and other European countries. Cuban leaf tobacco was imported to the value of 711,695 pesos, and other leaf tobacco to the value of 1,711,457 pesos, of which about two-thirds came from Brazil, with importations of lesser amounts from the United States, Germany, the United Kingdom, and Belgium. The imports of tobacco extract for sheep dipping amounted to 1,860,900 pesos, the great bulk from the United Kingdom, with a less amount from the United States.

WINES AND SPIRITS.

The importation of wines amounted to 10,874,638 pesos, and was principally from France, Italy, Spain, and Portugal, in the order given. Nearly all the champagne came from France, together with some cheaper wines and vermouth. The bulk of vermouth was from Italy, and the cheaper wines came from Italy and Spain. Sherry was from Spain, and port from Portugal. The distilled liquors were from France and Italy, principally, with gin from the Netherlands and whisky from the United Kingdom. The total amount of the imports of distilled liquors was 3,234,862.

The importation of beer, cider, mineral waters, etc., was 841,651 pesos, of which nearly one-half represented mineral water, principally from Italy, France, Spain, and Austria. The beer importation amounted to 159,256 pesos, the great bulk of which was bottled beer proceeding from the United Kingdom, the United States, and Germany, in the order given. The importation of bottled cider amounted to 193,360 pesos, nearly all of which was from Spain.

TEXTILES.

Under the heading of "Textiles, and manufactures thereof," the silk importation was 5,626,098 pesos; wool, 13,465,362 pesos; cotton, 38,730,664 pesos; and other textiles, 10,543,043 pesos.

The principal silk imports were from France, Italy, the United Kingdom, and Germany.

The importation of all-wool ready made clothing was 782,568 pesos, which came principally from France, the United Kingdom, and Germany. The woolen-stocking imports amounted to 104,773 pesos, principally from France, Germany, and the United Kingdom. The imports of all-wool cloth amounted to 6,647,475 pesos, and was from the United Kingdom, France, and Germany, principally, with lesser amounts from Belgium, Spain, and Italy. Wool cloth, silk mixed, amounted to 815,256 pesos, principally from the United Kingdom and France. Wool, mixed with other textiles, was imported to the value of 2,748,319 pesos, the great bulk of which was from the United Kingdom with lesser amounts from Germany, Italy, France, and Belgium.

Cotton textiles, 38,730,664 pesos. The principal articles under the cotton schedule were: Ready-made clothing, 710,545 pesos, from France, Germany, United Kingdom, and Belgium, principally. Cotton yarn, dyed, 704,816 pesos; not dyed, 1,244,272 pesos. The dyed yarn came principally from Germany, the Netherlands, Belgium, and Italy, and the not dyed from the United Kingdom, Italy, the Netherlands, and the United States. Cotton bags, 394,199 pesos, the bulk from the United Kingdom and the United States. Carpets, 218,507 pesos, for the most part from France, Italy, Germany, and Belgium. Bedspreads, etc., 645,242 pesos, from Italy and the United Kingdom. Laces, 1,993,848, from the United Kingdom, Germany, Switzerland, Italy, and France, in the order named. Spool cotton, 659,535 pesos, nearly all from the United Kingdom. Canvas, white, 200,047 pesos, the bulk of which was from the United States. Canvas, colored, 127,838 pesos, from the United Kingdom, the United States, Belgium, and Germany, principally. Hosiery, 1,499,702 pesos, the great bulk of which came from Germany, with a less amount from France. Handkerchiefs, 764, 813 pesos, principally from the United Kingdom with lesser importations from Italy, Germany, and France. Handkerchiefs, silk mixed, 101,760 pesos, principally from France. White cotton cloth, 3,862,025 pesos, nearly all from the United Kingdom, Italy second. Unbleached cotton cloth, 819,769 pesos, nearly all from the United Kindgom. Cotton prints, 4,085,793 pesos, the great bulk from the United Kingdom; smaller amounts from Germany, France, Spain, and Italy. Dyed cotton cloth, 14,181,306 pesos, from the United Kingdom, Italy, Germany, and Belgium, principally. Cotton cloth, not specified, 1,001,105 pesos, about half from the United Kingdom; the balance from Spain, Germany, France, and Italy, principally. Cotton cloth, wool mixed, 1,695,206 pesos, the bulk from the United Kingdom, followed by Germany, Belgium, France, and Italy. Cotton cloth, silk mixed, 1,119,028 pesos, nearly half from France, the remainder from Germany, Italy, and the United Kingdom, principally.

OTHER TEXTILES.

Of these the principal ones were: Linen ready-made clothing, 108,280 pesos, principally from France; sailcloth, 1,497,332 pesos, from the United Kingdom, France, Belgium, and Germany; ticking, 149,702 pesos, principally from Belgium and the United Kingdom; cloth for wrapping meat, 510,739 pesos, practically all from the United Kingdom; sacking, dutiable, 1,454,563 pesos, practically all from the United Kingdom and British possessions; sacking, free, 5,260,610 pesos, about three-fourths from the British possessions and the remainder from the United Kingdom; twine, 672,085 pesos, principally from the United Kingdom and Italy; oilcloth, 427,156 pesos, the bulk from Great Britain and the remainder from the United States and Germany, principally; linen canvas, 381,447 pesos, from Italy and the United Kingdom; hosiery thread, 214,140 pesos, principally from France, Germany second; elastic cloth, other than for shoes, 175,912 pesos, principally from Italy, the United Kingdom, and Germany; and all linen cloth, 482,749 pesos, principally from Belgium, the United Kingdom, France, Italy, and Germany.

OILS, GREASES, ETC.

The importation of cottonseed oil was 207,456 pesos, a falling off of more than one-half from the year before, practically all from the United States; schist oil, 559,397 pesos, principally from the United Kingdom and Roumania; lubricating oil, 1,964,573 pesos, the great bulk from the United States, the remainder from the United Kingdom and Russia; olive oil, 3,929,892 pesos, nearly all from Italy and Spain; oil of turpentine, 183,959 pesos, practically all from the United States; essential oils, 181,110 pesos, principally from Germany, France, Italy, and the United Kingdom; kerosene, 2,139,166 pesos, practically all from the United States; unrefined naphtha, 3,947,858 pesos, from the United States, the Dutch possessions, and Peru.

CHEMICAL AND PHARMACEUTICAL PRODUCTS.

The principal items were: Tartaric acid, 473,793 pesos, the bulk of which was from Italy and the balance from France and Germany; medicinal cotton, 131,856 pesos, nearly all from Germany and Italy; alum, 176,189 pesos, nearly all from the United Kingdom and the Netherlands; stearin candles, 520,957 pesos, from Belgium, the Netherlands, and the United Kingdom; calcium carbide, 1,481,784 pesos, principally from Norway, the United States, and Sweden; glue, 120,868 pesos, from France, Italy, and Germany; glucose, 226,691 pesos, nearly all from the United States; common soap, 157,262 pesos, the bulk from the United Kingdom; medicinal soap, 260,399 pesos, the bulk from France; proprietary medicines, 2,362,103 pesos, from France, Germany, the United States, Italy, and the United Kingdom principally, and in this order; wood pulp, 793,111 pesos, from Germany, Norway, Sweden, Russia, and the United Kingdom; perfumery, 1,169,405 pesos, principally from France, the remainder for the most part from the United Kingdom, Germany, and Italy; resin, 392,152 pesos, nearly all from the United States; gunpowder, other than mining, 555,285 pesos, from the United States, Germany, the United Kingdom, and France; sodium chlorate, 412,403 pesos, nearly all from Spain; caustic soda, 299,494 pesos, from the United Kingdom and Germany principally; soda ash, 116,194 pesos, nearly all from the United Kingdom; and impure sulphate of copper, 170,208 pesos, nearly all from the United States.

PAINTS, DYES, ETC.

The principal items were: Aniline, 178,509 pesos, nearly all from Germany; varnishes, 442,812 pesos, from the United Kingdom principally, followed by the United

States, Germany, and the Netherlands; paints, in powder or lump, 281,219 pesos, from Germany, France, and the United Kingdom; prepared paints, 602,870 pesos, the great bulk from the United Kingdom, lesser amounts from Germany, the United States, and France; enamel paints, 307,650 pesos, from the United States, the Netherlands, the United Kingdom, and Germany, in this order; and printing and lithographic inks, 109,562 pesos, from France, Germany, and the United States.

TIMBER, WOODS, STRAW, AND MANUFACTURES THEREOF.

The principal items were: Cork blocks, 233,115 pesos, from Spain and Portugal; staves and empty barrels, 683,497 pesos, nearly all from the United States; ash, unplaned, 114,605 pesos, nearly all from the United States; lumber, other than building, 753,397 pesos, nearly all from Portugal; oak timber, other than building, 238,520 pesos, principally from the United States.

Of the manufactures of wood, etc., amounting to 6,002,695 pesos, the principal items were furniture, 2,406,695 pesos, from the United States, United Kingdom, Germany, France, Austria-Hungary, and Italy, in the order named; pianos, 1,019,162 pesos, the bulk from Germany and the remainder from the United States, France, and Spain; and straw hats, 331,751 pesos, from Italy, France, and the United Kingdom, principally.

PAPER AND MANUFACTURES THEREOF.

The principal importations were pasteboard, 522,802 pesos, chiefly from Germany and the Netherlands; cardboard, 156,293 pesos, from Germany and Spain; print paper, 1,416,124 pesos, principally from Germany, Sweden, the United Kingdom, and the United States; writing paper, 496,717 pesos, from Germany, Italy, Austria, and the United Kingdom; building and packing paper, 927,766 pesos, principally from Germany; and wall paper, 235,601 pesos, from Germany and France. Manufactures of paper, including books, calendars, music, prints of all kinds, cards, etc., the importation was 3,522,700 pesos and was from the United Kingdom, Germany, Spain, Italy, France and the United States, in about this order.

HIDES, SKINS, AND MANUFACTURES.

Leather shoes in general were imported to the value of 508,235 pesos, principally from the United Kingdom, the United States, and Germany; other shoes, 86,744 pesos, principally from the United Kingdom, France, and Germany; pocketbooks, 143,377 pesos, from Germany, France, and the United States; gloves, 183,761 pesos, chiefly from France, Germany, Italy, and the United Kingdom; fur garments, 223,180 pesos, the bulk from France; goatskins, 513,019 pesos, from France, the United States, and Germany; and Morocco skins, 388,863 pesos, from France, United States, and Germany.

IRON, STEEL, AND MANUFACTURES.

Total imports, 43,119,488 pesos. Under this heading appear the subheads "Raw material, or relatively raw material," and "Manufactures." Steel and iron for building purposes, railways, tramways, etc., and for agricultural use are not included in either of these classifications.

Under "Raw material" the principal items are: Steel ingots and sheets, 567,480 pesos, the great bulk from the United Kingdom, lesser amounts from Germany, France, and Belgium; wire of all kinds, 4,403,861 pesos, nearly all of which came from Germany, United States, the United Kingdom, and Belgium in this order; plain galvanized wire was from Germany chiefly, followed by the United Kingdom and the United States. The United States sent the bulk of galvanized barbed wire, followed by Germany, the United Kingdom, and Belgium. The bulk of the ungalvanized wire was from Germany; the United States second. The importation of rails amounted to 828,903 pesos, the bulk from the United Kingdom and Belgium. Iron in ingots and sheets, 6,082,086 pesos, from Germany, Belgium, the United Kingdom, and the United States principally; wrought iron, 1,740,674 pesos, from the United Kingdom, Germany, France, Belgium, and the United States; galvanized iron, 7,797,245 pesos, the great bulk of which was from the United Kingdom, with lesser amounts from Germany, the United States, and Belgium; bolts and nuts, 2,149,578 pesos, from the United Kingdom, Belgium, France, Germany, and the United States.

Under manufactures of iron and steel the principal items were: Firearms and accessories, 702,607 pesos, principally from Belgium, the United States, Germany, and the United Kingdom; kitchen and household utensils, 1,124,773 pesos, principally from Germany, with lesser amounts from France, the United Kingdom, Belgium, and the United States; bathtubs, 335,860 pesos, from the United States, Germany, and the United Kingdom; hinges, 206,821 pesos, from Germany and the United States, chiefly; pumps, 312,573 pesos, the great bulk from the United States; wire cables, 121,050 pesos, principally from the United Kingdom; chains, 188,463 pesos, principally from Germany, the United Kingdom, France, and Belgium; locks and fastenings, 261,543 pesos, the great bulk from Germany; cutlery, 421,961 pesos, principally from France, Germany, and the United Kingdom; axes and adzes, 155,847 pesos, the great bulk from the United States; small tools, 532,407 pesos, from Germany, the United States, the United Kingdom, and France; files, 193,959 pesos, from the United Kingdom, Germany, and the United States; sewing machines, 860,161 pesos, from the United States and Germany, principally; typewriters, 214,795 pesos, the great bulk from the United States, Germany second; miscellaneous machinery, 6,632,649 pesos, from the United Kingdom, Germany, the United States, France, and Belgium; windmills, 672,406 pesos, principally from the United States; miscellaneous motors, engines, etc., 590,963 pesos, from the United States and the United Kingdom; hay and wool presses, 137,991 pesos, principally from the United States; spare parts for machinery of all kinds, 2,179,691 pesos, principally from the United Kingdom, Germany, the United States, and Canada; saws, 136,244 pesos, principally from the United States, France, United Kingdom, and Germany; wire cloth, 375,520 pesos, principally from Germany, the United States, and the United Kingdom; scissors and shears, 101,751 pesos, from Germany, the United Kingdom, and France in the order given.

OTHER METALS AND MANUFACTURES.

This general heading is divided into two classes, namely, "Raw or relatively raw material," the imports of which amounted to 3,730,120 pesos, and "Manufactures," 9,140,335 pesos. The principal items under the first heading were copper and brass wire, 133,765 pesos, principally from the United Kingdom, France, Germany, and Belgium; copper and bronze in billets, bars, and sheets, 448,694 pesos, principally from the United Kingdom, Germany, Belgium, and France; block tin, 333,075 pesos, nearly all from the United Kingdom; tin plate, 1,269,523 pesos, nearly all from the United Kingdom, a small amount from the United States; sheet and bar lead, 611,943 pesos, the bulk from Spain, a lesser amount from the United Kingdom, France, and Italy; zinc in bars and sheets, 802,982 pesos, principally from Belgium, France, Germany, and the United Kingdom. Under the second heading, "Manufactures," the principal items were: Pins, 178,346 pesos, chiefly from Germany, France, and the United Kingdom; fine jewelry (except watches and loose precious stones), 1,611,642 pesos, principally from Germany, France, Italy, the United Kingdom, and Switzerland; miscellaneous manufactures of copper and bronze, 1,047,239 pesos, principally from the United Kingdom, Germany, France, and the United States; electroplated articles, 596,550 pesos, chiefly from Germany, France, the United Kingdom, and the United States; gas fixtures, electric apparatus, and kerosene lamps, 808,449 pesos, from Germany, France, the United Kingdom, and the United States; copper and brass piping and tubes, 195,938 pesos, principally from the United Kingdom and Germany; mathematical, optical, physical, and surgical instruments, 181,628 pesos, from Germany and France; gold watches, 642,672 pesos, from Switzerland, the United States, France, and Germany in the order given.

AGRICULTURAL IMPLEMENTS, MANUFACTURES, AND SUPPLIES.

The principal imports were: Plows, 1,870,225 pesos, the large bulk of which came from the United States, with a lesser quantity from Germany; sacking and sacks, 5,473,937 pesos, nearly all of which was from the English possessions (India) and the United Kingdom; rakes, 219,740 pesos, principally from the United States; reapers, 1,308,265 pesos, the bulk from the United States, with lesser amounts from Austria and Canada; grain drills, 553,605 pesos, nearly all from the United States; alfalfa seed, 1,777,307 pesos, principally from Italy and Germany; other seeds, 2,143,960 pesos, from Germany and Italy; thrashers, 995,840 pesos, from the United Kingdom and the United States.

RAILWAY CARS, CARRIAGES, CARTS, ETC.

The principal items were: Accessories and spare parts for railway cars, 539,465 pesos, principally from France, the United Kingdom, and Germany; automobiles, 1,368,209 pesos, from France, Italy, the United Kingdom, the United States, and Germany; carriages, 574,821 pesos, nearly all from the United States; railway passenger cars, 1,347,229 pesos, principally from the United Kingdom, with lesser amounts from Belgium, Austria, the United States, and Germany; street railway cars, 379,566 pesos, from the United Kingdom, Belgium, and the United States; fishplates, 2,379,907 pesos, from the United Kingdom, Germany, France, and Belgium principally; hubs, 358,663 pesos, from France and the United Kingdom principally; locomotives, 4,559,785 pesos, from the United Kingdom, Germany, the United States, and France; railway material, 5,074,691 pesos, the great bulk from the United Kingdom, with smaller amounts from Germany, Belgium, France, and the United States; street railway material, 407,915 pesos, from the United Kingdom, Germany, Belgium, and the United States; carriage and wagon springs, 468,777 pesos, from France, the United States, the United Kingdom, and Germany; steel rails, 11,012,249 pesos, the bulk from the United Kingdom, with lesser amounts from Germany, France, the United States, Belgium, and Russia; steel wheels and hubs, 678,793 pesos, nearly all from the United Kingdom; railway freight cars, 5,140,276 pesos, the great bulk from the United Kingdom, with lesser amounts from Belgium, the United States, and France; bicycles, 330,889 pesos, principally from the United Kingdom and Germany, with lesser amounts from France and Italy.

EARTHS, STONES, COAL, ETC.

The principal items were: Paving blocks, 377,445 pesos, principally from Uruguay; Trinidad asphalt, 155,330 pesos, principally from the United States; coal, 23,284,489 pesos, nearly all from the United Kingdom; coke, 217,209 pesos, from the United Kingdom; precious stones and pearls, loose, 755,292 pesos, nearly all from France; paving stones, 387,648 pesos, from Uruguay.

Of manufactures of earths, etc., the principal items were: Glassware, 1,326,118 pesos, from Germany, Belgium, and France; lamp chimneys, 108,808 pesos, principally from Germany, with lesser amounts from the United States, the United Kingdom, and Austria; glass bottles and flasks, 390,590 pesos, nearly all from Germany; apothecaries' bottles, 109,568 pesos, from Germany, the United States, and France; china and glass lamps, 178,032 pesos, principally from Germany; china and earthen ware, 1,546,143 pesos, from the United Kingdom, Germany, France, Belgium, and the Netherlands.

BUILDING MATERIALS.

The principal items were: Building sand, 862,664 pesos, all from Uruguay; tiles, 801,833 pesos, principally from France and Spain; iron pipe, 1,051,573 pesos, nearly all from the United Kingdom, with small amounts from Germany and France; galvanized iron pipes, 1,691,685 pesos, the great bulk from the United Kingdom, with small amounts from the United States and Germany; cedar, 366,610 pesos, mostly from Paraguay, with small amounts from Brazil; fire brick, 109,760 pesos, nearly all from the United Kingdom; marble and other fine building stone in block or slab, 574,377 pesos, nearly all from Italy; mosaics, 133,007 pesos, from Germany, the United Kingdom, Belgium, and the United States; parquetry, 130,641 pesos, from France, Belgium, Italy, and Germany; white pine, 2,458,634 pesos, the great bulk from the United States, about one-fourth from Canada; Oregon pine, 105,094 pesos, all from the United States; yellow pine, 8,960,998 pesos, nearly all from the United States, a small amount from Canada; spruce pine, 3,161,263 pesos, the bulk from the United States and about one-fourth from Canada; cement, 2,718,400 pesos, from Belgium, the United Kingdom, and the United States; iron columns and beams, 3,065,883 pesos, from Germany, the United Kingdom, France, and Belgium principally; terra-cotta pipes, 126,749 pesos, from the United Kingdom and Germany; glass, flat, 1,797,501 pesos, principally from Belgium and the United Kingdom.

ELECTRICAL APPARATUS.

Total amount, 5,741,530 pesos. The principal items were: Wire and cable, 2,927,526 pesos, about one-half from Germany, about one-fourth from the United Kingdom, and the balance from Italy, the United States, and Belgium; dynamos and electric motors, 542,027 pesos, of which the United Kingdom and Germany furnished the bulk, with lesser amounts from the United States, France, Belgium, and Italy; arc lamps, 116,673 pesos, the great bulk of which was from Germany; incandescent lamps, 597,357 pesos, also from Germany; miscellaneous materials for electrical use, 564,068 pesos, of which the greater amount was from Germany, with lesser amounts from the United Kingdom, the United States, and other countries.

Other items, not included in any mentioned above, were: Accessories for underground cable, accumulators, insulators, telephone apparatus and materials, electric bells and buttons, arc light carbons, insulated cord and piping, vulcanized fiber, telegraph material, electric motors, electric batteries and material, and electric ventilators.

MISCELLANEOUS ARTICLES AND MANUFACTURES.

Total amount, 9,814,165 pesos. The principal items were: Articles of gutta-percha and rubber not otherwise classified, 438,635 pesos, principally from the United Kingdom; buttons of all kinds, except of the precious metals, 437,768 pesos, principally from Germany and France; rubber tubing, 216,121 pesos, principally from Germany, the United States, and the United Kingdom; brushes, 143,742 pesos, from France, Germany, Italy, and the United Kingdom principally; disks and cylinders for graphophones, 429,419 pesos, from Germany, the United States, and France; miscellaneous postal packages, 750,929 pesos, from France, Italy, and the United Kingdom principally; sponges, 115,284 pesos, from the United States, France, Italy and the United Kingdom principally; miscellaneous toys, 844,067 pesos, from Germany and France; miscellaneous mining supplies, 136,719 pesos, from the United Kingdom, Germany, and the United States; material for sanitary use, 182,635 pesos, from the United Kingdom and Germany; material for bridge construction, 1,021,239 pesos, from the United Kingdom, Germany, France, and Belgium; articles for church use, 141,775 pesos, from France, Spain, Italy, and Germany; combs, 311,031 pesos, the bulk from France, lesser amounts from Germany and other countries; feathers for millinery, 140,268 pesos, nearly all from France; miscellaneous apothecaries' utensils and apparatus, 662,763 pesos, from Germany, France, the United Kingdom, Italy, and the United States; stationers' miscellaneous goods, 123,573 pesos, principally from Germany, France, the United Kingdom, and the United States.

EXPORTS.

The exports by principal countries of procedure for the last three years were as follows:

Countries.	1908	1909	1910
	Pesos.	*Pesos.*	*Pesos.*
United Kingdom	78,324,723	80,745,066	80,792,485
Germany	34 751,994	41,353,332	45.054,817
France	28,913,730	38,996.004	37,761,712
Belgium	35,778,188	41,306,799	30,480,743
United States	13,023,238	26,066.790	25,325,561
Brazil	15,095,578	16,628,413	17,542,026
Italy	7,907,857	12,635,710	10,474,862
Netherlands	5,299,670	6,052,385	4,300,508
Spain	2.599,603	3,200,259	2,870,077
Chile	1,537,507	2,671,567	2,706,566
Austria-Hungary	1.071,134	1,254,599	1,867,703
Uruguay	774,454	1.363,901	1,533,957
Denmark	426,078	1,511,550	1,225,088
Portgual	821,663	266,032	1,020,429
Cuba	358,752	543,958	762,759
Sweden	536,062	770,738	743,195
Bolivia	593,726	498,773	578,478
South Africa	860,442	111,972	337,254
On orders	135,425,596	117,837,922	103,783,235
Other countries	1,885.346	3.534,758	3,464,600
Total	366,005,341	397,350,528	372,626,055

The exports above classified by countries include only such exports as are shipped directly to a definite destination. The shipments "on orders," which, as is seen by the above table, comprehend in 1910 nearly 28 per cent of the total exportation, are shipments subject to a subsequent cable or other order by which the destination may be changed after leaving the country. The great bulk of these shipments are finally taken by the leading European countries.

Argentine exports are classified under six heads, which for the last three years were as follows:

Articles.	1908	1909	1910
	Pesos.	*Pesos.*	*Pesos.*
Live animals and meat products	115,118,457	153,548,356	161,006,592
Agricultural products	241,677,164	230,503,996	196,581,619
Forest products	6,347,234	8,927,362	10,564,525
Mine products	810,961	742,707	539,902
Hunting and fishing	498,612	752,020	1,428,884
Miscellaneous	1,552,913	2,876,087	2,504,533
Total	366,005,341	397,350,528	372,626,055

Live animals and meat products are subdivided under four heads, as follows:

Articles.	1909	1910
	Pesos.	*Pesos.*
Live animals	4,992,726	5,055,706
Ordinary animal products	130,386,137	135,033,322
Elaborated animal products	15,850,673	18,286,237
Residuary animal products	2,318,820	2,631,327
Total	153,548,356	161,006,592

Under the subhead "Live animals," the exports for 1910 were as follows:

Articles.	Head.	Value.
		Pesos.
Asses	9,249	184,980
Beef cattle	89,733	4,056,450
Horses	4,447	290,550
Llamas	94	376
Mules	9,727	291,810
Sheep	77,180	231,540
Total		5,055,706

Practically all the asses and llamas are exported to Bolivia, and the mules to Uruguay Bolivia, Chile, Brazil, and South Africa.

Of beef cattle, 11,877 head went to Uruguay, 6,840 to Brazil, and 2,677 head to Italy; the bulk of the remainder to Chile.

Of horses, 387 head went to Italy, 386 to Uruguay, 330 to Brazil, and 303 to the United Kingdom; the bulk of the remainder to Chile, Paraguay, and Portugal.

Of sheep, 52,082 went to Belgium, 4,814 to Uruguay, 1,100 to Italy, and 1,180 to Brazil.

Under the subhead "Ordinary animal products," the exports for 1910 were as follows:

Articles.	Quantity.	Value.
		Pesos.
Horns of cattle kilos	3,200,155	243,212
Frozen beef do	245,266,825	24,526,682
Chilled beef do	8,441,336	844,133
Frozen mutton do	75,101,661	6,008,133
Bristles do	2,591,512	1,335,160
Frozen pork do	1,010	151
Goatskins do	1,698,882	1,001,824
Kid skins do	517,823	310,694
Lambskins dozen	111,900	33,570
Salt sheepskins kilos	3,451,259	690,251
Unwashed sheepskins do	29,383,968	7,933,671
Salt cattle hides do	61,029,326	16,953,372
Flint cattle hides do	29,844,258	13,758,036
Salt horsehides do	130,376	15,526
Flint horsehides do	1,956,884	484,893
Unwashed wool tons	150,599	58,847,699
Smoked tongues kilos	947,842	284,352
Leaf tallow do	4,189	293
Jerked beef do	9,442,449	1,033,020
Bacon do	17,580	7,032
Miscellaneous frozen meats do	11,101,809	721,618
Total		135,033,322

Of frozen beef, 243,717,000 kilos went to the United Kingdom, and 1,168,000 to Italy; frozen mutton, 75,058,000 kilos went to the United Kingdom, and 41,000 to Italy; bristles, 905,000 kilos went to Belgium, 592,000 to the United States, 450,000 to Italy, 210,000 to Germany, 173,000 to France, and 141,000 to the United Kingdom; goat and kid skins, 1,504,000 kilos went to the United States, 596,000 to France, and 17,000 to the United Kingdom; sheepskins, 26,000,000 kilos went to France; salt hides, 23,668,000 kilos were exported to Germany, 12,592,000 to the United States, 10,781,000 to the United Kingdom, 9,560,000 to Belgium, 1,400,000 to France, and 1,017,000 to Italy; flint hides, 14,703,000 kilos went to the United States, 5,866,000 to Italy, 2,841,000 to Spain, 2,621,000 to Germany, 1,566,000 to Belgium, and 606,000 to France; horsehides, 1,770,000 kilos went to Germany, 272,000 to the United States, 29,000 to Belgium, and 6,000 to France; wool, 58,967,000 kilos were exported to France, 40,707,000 to Germany, 16,682,000 to Belgium, 10,496,000 to the United States, and 1,903,000 to Italy; jerked beef, 2,647,000 kilos went to Brazil, and the bulk of the remainder to Cuba and South American countries.

Under the subheading "Elaborated animal products" the exportation in 1910 was as follows:

Articles.	Quantity.	Value.
		Pesos.
Animal oils ... kilos..	347,353	54,750
Soup stock ... do....	680,978	204,293
Canned meat ... do....	12,081,869	1,208,187
Casein ... do....	2,927,703	594,540
Glue ... do....	45,450	9,090
Cream ... do....	125,112	37,534
Dressed sheepskins ... dozen..	50,166	200,664
Stearine ... kilos..	78,372	20,377
Meat extract ... do....	1,523,340	3,046,680
Glycerine ... do....	524,488	131,122
Beef scrap and meal ... do....	3,169,911	1,267,964
Common soap ... do....	9,936	597
Lard ... do....	16,171	3,233
Butter ... do....	2,876,526	1,150,610
Honey ... do....	1,036	104
Margarin oil ... do....	5,444,493	816,673
Cheese ... do....	367	73
Rendered tallow and grease ... do....	58,405,631	9,536,681
Sole leather ... pieces..	613	3,065
Total ...	...	18,286,237

The bulk of the animal oils went to Germany; soup stock to the United Kingdom and Uruguay; canned meat, the bulk to the United Kingdom; casein, the bulk to Germany, and the United Kingdom with lesser amounts to the United States, the Netherlands, and Belgium; dressed sheepskins, the great bulk to the United States; stearine, practically all to the United Kingdom; glycerine, the United Kingdom and Germany took nearly all; beef scrap and meal, the bulk to the United Kingdom, Germany, and Uruguay; butter, 2,873,000 kilos went to Great Britain; margarine oil, practically the whole exportation to Great Britain; rendered tallow and grease, 29,452,000 kilos went to the United Kingdom, 10,654,000 to Germany, 4,807,000 to Italy, 2,313,000 to Belgium, 1,278,000 to Spain, 1,106,000 to France, 342,000 to Brazil, and 289,000 to the United States; sole leather, practically all went to Bolivia.

Under the subheading "Residuary animal products," the exportation in 1910 was as follows:

Articles.	Kilos.	Value.
		Pesos.
Bone ash ...	1,454,174	12,559
Lard scrap ...	2,894,578	144,729
Hoofs (cloven) ...	2,674,876	53,497
Tankage ...	19,119,167	477,979
Bones ...	29,488,583	1,448,649
Hoofs ...	976,659	12,208
Dried blood ...	4,913,324	245,667
Salted casings ...	4,586,515	229,825
Dry casings ...	155,336	6,214
Total ...	...	2,631,327

The bone ash was exported to the United Kingdom; lard scrap to the United Kingdom, Germany, France, and Belgium; hoofs, the bulk of horse hoofs went to the United States, and of the split hoofs the bulk to Italy, United Kingdom, and Spain; tankage, the principal export was to the United Kingdom and the United States; bones, 21,211,000 kilos to the United States, 4,103,000 to the United Kingdom, 2,577,000 to France, 874,000 to Belgium, 257,000 to Spain, 332,000 to Germany, and 118,000 to Italy; dried blood went to the United States, the United Kingdom, and France;

salted casings went principally to Germany, with lesser amounts to the United Kingdom, Italy, and Spain; dry casings went principally to Spain and the United Kingdom.

Agricultural products are classified under three subheads, as follows:

Articles.	1909	1910
	Pesos.	*Pesos.*
Primary products	219,770,727	186,317,291
Elaborated products	5,729,651	5,109,192
Residuary products	5,003,618	5,155,136
Total	230,503,996	196,581,619

Under the subhead "Primary products," the exports for 1910 were as follows:

Articles.		Quantity.	Value.
			Pesos.
Alpiste	kilos	4,157,397	207,870
Rice	do	71,686	2,774
Carob beans	do	12,625	631
Oats	tons	370,948	8,142,575
Barley	kilos	4,749,987	131,574
Rye	do	926,714	11,584
Melted wax	do	13,123	7,874
Fresh fruits	do		38,834
Linseed	tons	604,877	44,604,395
Maize	do	2,660,225	60,260,804
Peanuts	kilos	76,104	2,283
Guinea straw	do	381,785	15,271
Potatoes	do	5,914,794	118,296
Hay	do	31,210,208	478,228
Beans	do	258,778	10,351
Rape seed	do	1,960,592	58,817
Spurge seed	do	234,459	7,033
Miscellaneous seeds	do	252,429	9,481
Leaf tobacco	kilos	42,370	6,356
Wheat	tons	1,883,592	72,202,260
Total			186,317,291

It is difficult in many cases to determine the final destination of a considerable portion of the Argentine agricultural exports which appear in the annual reports under the head of "On orders." The meaning of this term is that the final destination of the grain on leaving Argentina is not known, the shipment being made subject to cable orders to be subsequently sent to the first port at which the vessel touches.

Practically all of the alpiste was exported to Germany; carob beans to Brazil; oats, the bulk went to the Portuguese possessions, the United Kingdom, Belgium, and France; rye, the bulk to Belgium and the Portuguese possessions; barley, the bulk to Belgium and the Netherlands; most of the wax went to Germany; fresh fruits were exported to Uruguay and Brazil; linseed, 218,913 metric tons were "on orders," 86,294 tons to Germany, 82,233 to Belgium, 77,880 to the United Kingdom, 55,142 to the United States, 23,545 to France, and 7,614 to Italy; maize, 1,856,380 tons were "on orders," 188,671 tons to Belgium, 181,642 to Germany, 143,693 to the United Kingdom, 124,578 to Italy, 83,752 to France, 28,959 to Spain, 1,901 to Brazil, and 1,462 to the United States; potatoes, the bulk went to Uruguay, with lesser amounts to Brazil and Belgium; hay, 25,509,000 kilos went to Brazil, small amounts to Germany, Belgium, and Uruguay; nearly all of the beans went to Brazil; the rape seed went to Germany, the Portuguese possessions, and the United Kingdom, and the spurge seed went to Italy; leaf tobacco went to Uruguay; wheat, 939,654 tons were "on orders," 316,549 tons were exported to Brazil, 292,471 to the United Kingdom, 168,513 to Belgium, 60,667 to Germany, 24,550 to Italy, 23,713 to France, 11,271 to Spain, and 4,760 to the United States.

Under the subhead "Elaborated products," the exports for 1910 were as follows:

Articles.		Quantity.	Value.
			Pesos.
Cottonseed oil	kilos..	9,879	1,976
Linseed oil	do....	1,825	328
Maize oil	do....	371,489	74,298
Whole wheat flour	do....	135,323	2,706
Sugar	do....	55,754	4,460
Cigarettes of all kinds	do....	35,609	71,218
Sheep dip		16,150	4,037
Vermicelli	kilos..	29,812	2,980
Biscuits	do....	300	15
Wheat flour	tons..	115,408	4,947,137
Grits	kilos..	930	27
Argentina wine	liters..	100	10
Total			5,109,192

The cottonseed oil went to the United Kingdom, the linseed oil to Brazil, the maize oil to Belgium, whole wheat flour to Germany, sugar to Bolivia, sheep dip to Uruguay and Brazil, and vermicelli to Chile and Bolivia. Of wheat flour, 99,949 tons went to Brazil, 5,696 to the United Kingdom, 2,522 to Germany, 1,187 "on orders," 412 to Spain, 314 to Uruguay, 250 to Belgium, and 122 tons to the United States.

Under the subhead "Residuary vegetable products," the exports for 1910 were as follows:

Articles.		Quantity.	Value.
			Pesos.
Bran	tons..	250,777	4,521,783
Broken rice	kilos..	652,330	13,047
Argol	do....	732,672	43,960
Rice flour	do....	3,688,100	81,137
Brewers' grains	do....	549,138	27,457
Flax straw	do....	66,221	265
Rebacilla	do....	1,669,872	31,187
Residuum of sugar cane (bagasse)	do....	5,236	94
Residuum of maize	do....	1,390,830	13,909
Oil cake	do....	21,114,876	422,297
Total			5,155,136

Of the exports of bran, 185,278 tons went to Germany, 20,908 to Belgium, 17,721 to France, 12,729 to the United Kingdom, and small quantities to Brazil, the United States, Italy, Spain, and Uruguay. The argol went to Italy, Germany, and France; the rice flour to Germany, with small amounts to Spain and Italy; the brewers' grains to Germany and Belgium; flax straw to Brazil; maize residuum to Germany, and the oil cake to Germany, the United Kingdom, the Netherlands, France, and Belgium.

The exports of forest products in 1910 were as follows:

Articles.		Quantity.	Value.
			Pesos.
Quebracho sawdust	kilos..	840	8
Charcoal	hectoliters..	131,402	197,102
Cedar	cubic meters..	4,572	54,868
Railroad ties	ties..	800	1,200
Poplar, algarrobo, and ñandubay piles	pieces..	142,644	63,359
Ñandubay pegs	do....	24,595	2,460
Extract of quebracho	tons..	52,231	4,429,357
Firewood	pieces..	619,000	3,714
Miscellaneous woods			1,726
Short algarrobo and ñandubay posts	pieces..	175,083	152,285
Willow	kilos..	108,600	3,258
Poplar, algarrobo, and ñandubay posts	pieces..	50,835	48,946
Resins	kilos..	25,884	1,812
Quebracho logs	tons..	341,969	5,604,430
Total			10,564,525

The charcoal went to Uruguay, as did also most of the cedar, railroad ties, piles, firewood, and miscellaneous woods and posts; wool to Brazil, and resin to Germany. Of extract of quebracho, 27,373 tons went to the United States, 12,800 to the United Kingdom, 3,494 to Germany, 1,099 to Belgium, 778 to France, 661 to Italy, and 1,727 tons "on orders." Of quebracho logs, 187,312 tons went to the United Kingdom, 21,255 to Germany, 16,154 to the United States, 10,270 to Italy, 6,649 to France, 920 to Belgium, and 83,458 "on orders."

The exports of mine products in 1910 were as follows:

Articles.	Quantity.	Value.
		Pesos.
Impure powdered asbestos ..... kilos..	10,000	500
Borate of lime ..... do....	571,502	28,575
Bar copper ..... do....	5,790	2,316
Marble onyx ..... do....	300,778	6,582
Mica ..... do....	19,231	31,312
Copper ores ..... do....	2,149,997	372,771
Quartz ores ..... do....	900	70
Tin ores ..... do....	40,500	8,100
Silver ores ..... do....	902	450
Lead ores ..... do....	5,171	414
Lead and silver ores ..... do....	16,625	4,987
Vanadium ores ..... do....	17,500	1,050
Vanadinite (vanario) ..... do....	17,260	800
Wolfram ores ..... do....	808,566	80,857
Plaster	55,900	1,118
Total	.....	539,902

The borate of lime went to Germany; bar copper to the United States; onyx to France, and mica to the United Kingdom; copper ores chiefly to the United States, with lesser amounts to Germany and other countries; wolfram ores went to Germany principally, and plaster to Uruguay.

The hunting and fishing products amounted in all to 1,428,884, the principal of which were:

Articles.	Quantity.	Value.
		Pesos.
Whaleoil ..... kilos..	4,496,863	889,373
Wolf skins ..... dozen..	818	19,632
Nutria skins ..... kilos..	77,312	308,725
Ostrich plumes ..... do....	32,765	128,784
Heron plumes ..... do....	113	23,840

The whale oil went principally to the United Kingdom, with smaller amounts to Germany; the wolf skins to Germany, with small quantities to the United States; of the nutria skins, 66.424 kilos went to Germany, 5,379 to Belgium, 2,589 to Italy, and 60 to the United States. The ostrich plumes went principally to Italy, Uruguay, Germany, and Spain, and the heron plumes went to Germany and France.

The principal miscellaneous articles exported in 1910 were coal (reexported) to the amount of 285,772 tons, valued at 2,000,404 pesos, and scrap iron, 6,369 tons, worth 63,690 pesos, the latter item going principally to Italy.

PRODUCTS AND INDUSTRIES.

Agriculture continues to be the greatest source of national wealth of the Republic. Of a total of practically 19,500,000 hectares (hectare = 2.47 acres) of land under cultivation in 1910, 5,836,500 were sown to wheat, 3,005,000 to maize (Indian corn), 1,445,600 to linseed, 4,706,530 to alfalfa, and 4,360,000 to other crops such as oats, barley, rice, cotton, and the vine. The output of wheat, flax, and oats, by Provinces, during the agricultural year 1909–10 is given by the Argentine Department of Agriculture as follows:

Provinces.	Wheat.	Flax.	Oats.
	Tons.	*Tons.*	*Tons.*
Buenos Aires	1,340,299	281,762	495,745
Santa Fe	470,077	207,500	4,366
Cordoba	1,240,528	110,541	4,982
Entre Rios	154,508	100,697	10,799
Pampa Central	300,214	15,615	10,679
Other Provinces and Territories	60,000	500	3,000
Total	3,565,626	716,615	529,571

Of these amounts, there were exported up to September last 1,757,000 tons of wheat (including flour), 596,000 tons of flax, and 298,500 tons of oats.

While this output was not as large as that of 1908–9, due to adverse weather conditions, its value was greater, due to the rise in prices of cereals in the world's market. The value of the production for 1909–10 was: Wheat, $320,000,000; flax, $115,000,000; oats, $28,000,000; making a total of $463,000,000.

Argentina now stands eighth in the production of wheat, fourth in the area sown, and (1909 first) in 1910 second in the amount exported to other countries. The explanation of the relative differences is found in the proportion of production to inhabitants, for whereas the United States exports only about 15 per cent of its wheat crop, Argentina exports 80 per cent, the variance being due to the consuming capacity of 90,000,000 in the first case, and of only 7,000,000 in the second. Of the world's wheat supply, the United States furnishes 20 per cent and Argentina 5 per cent.

WHEAT is probably the oldest known grain. It has served for food of man since prehistoric times, and even its origin is lost in antiquity, for the wild plant from which it sprang has disappeared. A grass resembling wheat, and which crosses readily with wheat, has been discovered, however, and this would seem to be the obscure source of our present cereal. Probably the first grown wheat came from the region of Mesopotamia, spreading thence eastward into China and westward as far as the Canary Islands. In America it did not exist before the Spanish conquest, but was thereafter not slow to pass throughout the two continents.

Humboldt tells that it was introduced accidentally into Mexico by a soldier of Cortes, but that a priest carried it intentionally into Quito whence it was disseminated over South America. It made its way slowly toward the mouth of the Rio de la Plata, and even 25 years ago Argentina was supplying barely enough for its own use. Since then the production has increased rapidly, till now the Argentine crop is one of the factors to be reckoned with in the world's market.

The wheat ordinarily cultivated is the *triticum sativum*, the other varieties seeming to have so little nourishment as to make its agricultural use unprofitable. In Argentina the best known varieties are the Barletta, Russian, Hungarian, French, Saldomé, Tusela, Rieti, Candeal, and Taganrog. The Barletta—a soft or bread wheat originally brought from Italy and resembling American hard red wheat, though not so hard—is the most generally sown. As wheat differs considerably according to its growth in cold or hot countries, so climatic conditions must necessarily be a deciding factor in the selection of the grain planted. Cold-country wheat has flexible, thin, hollow straw, elongated ears, and soft seeds; hot-country wheat has solid, rigid straw. The farther from the equator wheat is grown the more quickly does it mature, because it has a longer interval of sun at just the time when light has the best quickening influence. Of course the reverse is true of winter wheat, so called, which in reality is the same as other wheats but gets that name because it is planted late instead of early in the year. To gain this advantage from climate, and for the reason also that soil shows favorable characteristics, the wheat area is extending toward the south and southwest in Argentina, and its earlier region of cultivation, especially north of Buenos Aires, is yielding to Indian corn.

Soft (*turgidum*), hard (*durum*), and Polish (*polonicum*) are the prime divisions of wheat ordinarily grown. The durum wheat is being gradually introduced into Argentina and is meeting favor both from the farmer who gets good crops from it, and from the merchant who finds that it returns an excellent price in foreign markets, and as 80 per cent of the crop is exported it is seen that the foreign market plays a very important part in the country's estimate of cultivation. The better the quantity and quality, and the more favorable the climatic conditions, the larger will be the supply to send abroad.

Twenty-five years ago Argentina was producing barely enough for its own use, but in the five years between 1898 and 1903 its yearly export averaged 51,000,000 bushels. To-day not more than 20 per cent of the possible area available for wheat is employed for it, and two-thirds of that is but poorly cultivated. The official figures of the area under cultivation (1910) are 6,253,000 hectares (15,451,000 acres), the production from which (1910) is stated to have been 139,625,000 bushels, the exports having been 69,205,500 bushels, to which must be added the export of flour of 1,298,100 bushels. The Provinces of Buenos Aires, Santa Fe, Cordoba, Entre Rios, and part of the Territory of the Pampa are the producing sections, while Buenos Aires, Rosario, Bahia Blanca, Colastine, and Villa Constitucion are the ports of exit.

While climate and accessibility to shipping ports are two very important factors in the wheat industry in Argentina, they do not by any means present the whole problem. There is the question of the water supply, either natural or by irrigation, and in many instances the fact that water may be easily obtained from the soil by pumps or artesian wells will make land higher in price than proximity to a railway. Then, again, soil may be poor, or droughts prolonged or excessive, or the locust plague may be imminent—all being obstacles to success against which the farmer has to contend—so that the cultivation of wheat, or of any crop for that matter, has its dark side, even in Argentina, and before committing himself seriously to the business of it the farmer must study the ground carefully from every aspect. That as high as 40 bushels to the acre are reported on well-cultivated lands is a fact, but it is equally true that less than 10 bushels have been harvested; seasons have in some localities been so bad that scarcely enough seed was obtained to meet the demands of the next harvest. Therefore Argentina must not be considered with blind confidence as the paradise of the agriculturist, but should be examined in the sane light of modern science and reason.

Maize (Indian corn) ranks next to wheat as a great national product of Argentina. (See article on Guatemala.) The area of cultivation, something more than 3,000,000 hectares (almost 7,500,000 acres), is in the same section as that of wheat, but it tends northward. Most of the corn is raised north of latitude 36° S., between 35° and 33° S., closer to the line than is the case in the United States (38° to 42° N.). Harvest begins at the end of February. The yield is astonishing, the average being 40 bushels to the acre, while 60 to 110 bushels have been recorded.

Production of corn in Argentina (bushels of 56 pounds).

Calendar years.	Production.	Exports.
1906	194,912,000	102,518,817
1907	71,768,000	50,262,705
1908	135,057,000	67,390,278
1909	177,157,000	89,499,359
1910	175,330,000	104,812,000

Linseed is another of the great crops of Argentina, its value being on the average above $40,000,000 gold. The area of cultivation is in the Provinces of Buenos Aires, Santa Fe, Cordoba, and Entre Rios. It has been hitherto utilized altogether for the oil from the seed, but recently an Argentine engineer, Señor Eusebio E. García, has made a most important discovery, which will give a new and powerful impetus to the flax industry of the Republic. It means that several millions of dollars worth of fiber that have hitherto been wasted annually will be turned to account. Señor García's discovery is a process of utilizing flax straw after the seed has been thrashed. A company has been formed in Buenos Aires which has already a plant capable of turning out daily 4 tons of flax fiber for the manufacture of textiles and fine paper, and 10 tons per day of material for the manufacture of tweeds, cordage, coarse paper, etc. These articles are now being imported into the country to the amount of $66,882,137 gold per annum. The government of the Province of Buenos Aires, realizing that the flax straw is of vital importance to the nation, has detailed an engineer to report upon the subject and to recommend such adequate measures as will promote the establishment of the new industry.

Oats and barley; sugar cane, especially in the Province of Tucuman; the vine and wine growing, in the Provinces of Mendoza, San Juan, Entre Rios, and La Rioja; alfalfa, of which 14,000,000 acres are planted in the wheat and corn region; tobacco in the northern and central sections; cotton to some extent but with increasing interest, are all products of substantial value for which the importance is steadily enlarging. Quebracho and yerba maté are recognized sources of national wealth, although both are also products of Paraguay and will be treated in the article on that Republic.

The other great category of natural wealth of Argentina is that of animal products, which form over 43 per cent of the total exportation and therefore bear an equally high relative value to the productive totals of Argentina. It is an interesting fact that all the animal food so abundantly supplied by this country is the result of stocking this incomparably rich land with animals introduced from European sources. In pre-Columbian times the only domestic animals possessed by the natives were the alpaca and the llama; the alpaca was grown for its flesh and its fleece, while the llama was used as a beast of burden. In 1535 the Spaniards brought in horses and asses, and shortly afterwards bovine cattle were taken to Asuncion (Paraguay), by a Portuguese. In 1569, 4,000 head were distributed along the regions of the Rio de la Plata. Sheep came later. At one time, when the natives were exceedingly hostile, a few horses and asses were abandoned on the pampas, and from such stock have descended the innumerable herds that to-day cover the almost limitless plains. A recent census shows that in Argentina there are over 29,000,000 bovine cattle, 7,500,000 horses, about 500,000 mules and 300,000 asses, over 67,000,000 sheep, almost 4,000,000 goats, and only 1,403,591 pigs, with a total value of about $700,000,000 gold. The Provinces of Buenos Aires, Santa Fe, Corrientes, Entre Rios, and Cordoba have the largest herds and support an average of 3 to 12 sheep or one-half to 2 cows a hectare (hectare=2.47 acres). Much of this stock is of mixed blood, but during recent years Argentina has imported the best animals obtainable and has bred with the direct intention of improving the stock as much as possible.

A farm (estancia) in Argentina is usually large and well organized under a general plan. It is surrounded by a wire fence and divided into fields varying in size from

A BATTERY OF BINDERS IN AN ARGENTINE WHEAT FIELD.

An idea of the extent of the wheat production of this country can be obtained when it is remembered that there are nearly 14,500,000 acres of land sown to this product. This acreage yielded during the past year 3,565,626 tons of wheat valued at $320,000,000.

100 to 2,500 hectares (250 to over 6,000 acres), used for different purposes, like breeding and fattening, all being supplied as well as possible with water either from streams, ponds, or wells. Some of the land is of course devoted to grains and the necessary vegetables of such an estate. The principal farmhouse (casa de la estancia) is situated about the center of the estate, and there may be around it quite a group of overseers' and laborers' cottages. If the farm is a general one, the laborers are usually allowed a plot of ground of 100 to 200 hectares (250 to 500 acres) for their own cultivation, the crop being apportioned between the owner and the laborer on an agreed percentage basis. Seldom is a farm restricted to a single crop or to one species of live stock, as this has been found to be hazardous and unprofitable, and, as a rule, the greater the amount of capital invested the larger are the returns for the money.

As the entire energy of life on the estancia is directed toward the production of foodstuffs and this chiefly for export, great effort is made to introduce modern methods of farming. The best of machinery is operated in the fields, and expeditious handling of cattle to get them to market is demanded. Naturally, therefore, the final analysis of the product of the pasture appears among the industries.

Just as naturally the industries of Argentina are vitally related to products of the farm. The country can not as yet be said to have become industrial in the sense that the productive forces are given to factories, but it has been found more in accord with economic principles to have within the country many establishments in which the agricultural resources are turned into the finished product for export rather than to send abroad the raw material.

Argentina was first known as a cattle country, simply exporting cattle on the hoof. Then the animals were killed and the meats were salted in saladeros, an industry that began in the last century. The final development of meat preparation is in the frigorificos (frozen or chilled meat establishments), the first of which began in Buenos Aires in 1883. In 1876, even, it had been demonstrated by a Frenchman that Argentine meat could be frozen and then transported to Europe, and this industry is the result. To-day it may be stated that $25,000,000 gold is invested, and that Europe, especially England, is depending more and more upon Argentina for its source of supply.

Another typical example is that of the wheat. While immense quantities of grain are yearly exported, yet a considerable proportion is now retained within the country and ground into flour, both for local consumption and for export. The first mill was operated by water power in Cordoba as early as 1580; a steam mill was started in Buenos Aires in 1845, but not until 1877 did the Republic cease to import wheat and, having enough for its internal consumption, begin exportation. In 1878 the first exportation of flour was declared, and since then flour has gone abroad, and really competes with the United States, especially in Brazil, where it has almost altogether absorbed the market south of Rio de Janeiro.

The manufacture of lard, butter, and allied dairy products is another growing industry. These and cheese are exported, and some of the best prepared milk in the world is to be had in the lecherias in Buenos Aires and the larger cities. Sugar cane has been grown in Argentina since the middle of the seventeenth century. Small mills for sugar production were of course existent at the same time, and now excellent sugar is manufactured in the best of modern mills, although the article is both exported and imported. Alcohol, beer, wine, oils, and chemicals are manufactured, but not in sufficient quantities to check imports altogether. Many cigarette and cigar factories are busy manufacturing tobacco, and tanning of skins is becoming a local industry. Good furniture, clothing, fine books, construction material, and many articles of domestic use are manufactured in Buenos Aires; but, while important locally, they do not absorb the energy of the people, nor can they compete with foreign articles in general. The country is an agricultural country, deriving its riches from the soil, and while there is great opportunity for certain kinds of manufacturing it will not be a nation of intense factory output for a generation or more.

RAILWAYS AND INTERIOR WATERWAYS.

An eminent geographer once said that by looking at the railway map of a country he could measure its wealth, its commerce, and its prosperity. When any region changes from a wilderness to the abode of civilized man, three factors contribute to the transformation—population, capital, and economic transport.

The Argentine Republic, which stretches over 33 degrees of latitude from north to south, and is therefore almost 4,000 kilometers (about 2,500 miles) long and 1,500 kilometers (932 miles) in greatest breadth, has been particularly fortunate in giving opening to these three factors, and thus to utilize to some extent the magnificent advantages with which nature has endowed the country. In fact, political and economic progress, according to a statement of one of their writers on national industry, began to be positively effective as the first railways were constructed. But even a quarter of a century ago the means of communication throughout the Republic were so scant, rudimentary, and insecure that interstate traffic was small and the nation seemed to be cloistered within itself.

To-day all this of the past. The means of communication, which are in Argentina the railways, are increasing with astonishing rapidity, and they have invigorated national unity, stimulated commerce, expanded the industries, and helped the products of Argentine soil to be known in all parts of the world. For the encouragement of these railways every force has been put to work, every sacrifice demanded has been cheerfully accepted by the people, and even in the midst of financial crises the struggle was made to meet all obligations which had been assumed to induce capital to invest in railway construction and operation. At present the result of the early efforts are but logical consequences of historical development. Former generations have been deeply interested in national organization, in finance; but the present generation and the one to come have a genial task in fostering and extending the transportation system of the country.

The first railway in Argentina was chartered for the Province of Buenos Aires according to the law of January 12, 1854. This was opened for traffic August 30, 1857, between the city of Buenos Aires westward to the station of La Floresta, now Velez Sarsfield, a distance of only 12 kilometers (7.45 miles). The capital invested was $285,108 gold; the passengers carried numbered 56,190; the freight amounted to 2,257 tons (metric ton=2,204 pounds); expenses were $12,448 and receipts $19,185. The table below gives a graphic idea of the growth of the railways since then:

Years.	Length.	Capital invested.	Passengers.	Freight.	Receipts.	Expenses.
	Kilos.	*Dollars gold.*	*Number.*	*Metric tons.*	*Dollars gold.*	*Dollars gold.*
1865	249	5,379,898	747,684	71,571	563,134	438,961
1870	732	18,835,703	1,948,585	274,501	2,502,569	1,356,252
1880	2,516	62,964,486	2,751,570	772,717	6,560,417	3,072,185
1890	9,432	321,102,691	10,069,606	5,420,782	26,049,042	17,585,406
1900	16,563	531,398,720	18,296,422	12,659,831	41,401,348	23,732,754
1905	19,794	627,230,616	26,636,211	22,409,995	71,594,919	39,396,094
1909	25,508	898,913,000	50,830,000	31,955,000	103,578,000	62,272,000

Of these 25,508 kilometers (15,850 miles), 15,466 kilometers (9,610 miles) were broad, that is, 1.676 meters (5½ feet) gauge; 2,265 kilometers (1,407 miles) were medium, that is, 1.435 meters (4 feet 8½ inches) or standard gauge; and 7,777 kilometers (4,833 miles) were narrow, that is, 1 meter (3.28 feet) gauge. Since the sale by the Government of the Andine Railway to private interests on November 1, 1909, all the above lines except the Central Norte (North Central) narrow gauge of 2,124 kilometers (1,310 miles), and the Argentino del Norte (Argentine Northern), also narrow gauge of 926 kilometers (575 miles), have been privately owned and operated, subject of course to regulations established by the Government.

The territorial distribution of these lines, not taking into consideration the most recent additions, which do not materially affect the proportions, is as follows:

	Kilometers.[1]
Province of Buenos Aires	8,065
Province of Santa Fe	4,004
Province of Cordoba	3,089
Province of Santiago del Estero	1,305
Province of Entre Rios	1,067
Territory of La Pampa	1,046
Province of Corrientes	727
Province of Mendoza	717
Province of Tucuman	619
Province of San Luis	561
Province of La Rioja	514
Province of Jujuy	423
Territory of Rio Negro	385
Province of Salta	367
Province of Catamarca	364
Territory of Chaco	156
Province of San Juan	138
Federal capital	103
Territory of Chubut	70
Territory of Neuquen	4

This railway expansion has placed the Argentine Republic the tenth among the countries of the world in length of line, being surpassed by the United States, Germany, Russia, France, India, Great Britain, Austria-Hungary, Canada, and Australia. The people have realized that it is not necessary to have a population before a railway should be built; the converse, rather, has been the rule, that to have a population to develop the rich soil a railway should precede, and therefore surveys have been encouraged and actual construction hastened into regions practically unvisited by man until then. In every conceivable direction the system is advancing, and each year adds a noticeable increase to the distance already in service. For example, while it is seen from the above table that most political divisions of the Republic have a railway of some extent, even within the last year the Territories of Formosa, Misiones, and Santa Cruz have been entered, and the Territories of Chubut and Formosa have added extensive trunk lines to their systems, the construction work on them cutting through regions that have been hitherto considered untracked wildernesses. This leaves only the Territories of Los Andes in the northwest and of Tierra del Fuego in the south without railways, but already plans have been made in each case to invade them.

The natural tendency of the railways in Argentina has been to converge from the interior toward certain eastern terminal points from which over-sea traffic could start. At first Buenos Aires was the only terminal; it remains the principal one to-day, but Santa Fe and Rosario on the Parana River are also foci of commerce. Farther south Bahia Blanca is becoming a very important entrepôt, and the shipping facilities are increasing in order to accommodate the growing railway traffic. Bahia Blanca will doubtless become the terminal for much of the product of the opening agricultural and pastoral regions south of it, but before long a still more southern port will be demanded, and serious attention is given to that project.

The railway situation at the beginning of 1910, the centennial year of Argentine independence, was a very encouraging one. The Government decided, therefore, in celebrating the one hundredth anniversary, to prepare an international railway and land transport exhibition in Buenos Aires, both as a demonstration of what had been accomplished and as a source of information for the probable solution of transportation problems of the future. It is well worth noting the subdivisions of the exhibit: Railways and tramways (nonelectric); electric railways; automobiles; cycles; means of communication by post, telegraph, and telephone; means of communication by animal traction; military traction and ambulances; road construction in cities and for sport; methods of packing; municipal transport, including fire protection; decorative art in transportation methods; hygiene in transportation; protection in transportation; exhibits of national industry and of working models; aeronautics. This shows how comprehensive was the scope, and how earnest Argentina is in the determination to utilize every element which will add to success in transport expansion. The results justified the effort, for 1910 was significant as that in which the largest addition for one year was made in Argentina's railway mileage.

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[1] Kilometer=0.621 mile.

According to the Argentine law, the railway year ends on the 30th of June. Consequently, as the complete report was made at that time, the 25,508 kilometers (15,850 miles) of railway stated to exist at the end of 1909 included kilometers which, by later calculation, appear in the early months of that year. The revised report gives 25,181 kilometers (15,646 miles) as the actual length of railways in operation on the 1st of January, 1910.

The total mileage of railroads in operation in the Republic at the close of the year 1910 was 28,636 kilometers (18,166 miles). The mileage of railroads opened to traffic during the year was 3,445 kilometers (2,140 miles), which is the greatest amount of new mileage recorded in any one year in the history of the country, and is more than twice that for the year 1909. While the greater part of this new mileage consisted of extensions and branches of existing roads, a considerable portion pertained to entirely new lines, a number of which are being constructed through the national Territories in the north and south. The new road from Rosario, the second city of the Republic, to Puerto Belgrano on the Atlantic coast east of Bahia Blanca, a distance of 793 kilometers (493 miles), was opened to traffic at the close of the year. It traverses a fertile agricultural region in the Provinces of Santa Fe and Buenos Aires, and connects with all of the large roads in that region. The lines completed in the Chaco from Formosa to Embarcacion, and from Barranqueras or Resistencia, opposite Corrientes, to Metan in the Province of Salta, will open up for development a very rich and extensive territory hitherto almost unknown.

Good progress was made during the year on the lines building in the south through the Territories of Rio Negro, Chubut, and Santa Cruz. The first of these, running from Puerto San Antonio to Lake Nahuel-Huapi, is expected to reach San Carlos de Bariloche, on the lake, by January, 1912, whence it is only 70 miles to Puerto Montt, the southern terminus of the Chilean railway system. Another line starts from Puerto Deseado, on the east coast of Santa Cruz, traverses all three Territories, and joins the first-mentioned road a short distance from Lake Nahuel-Huapi; while a third, commencing at Comodoro Rivadavia, runs westwardly toward the Chilean frontier, intersecting the line from Puerto Deseado. Work on a fourth route, from the port of San Blas to Carmen de Patagones and Choele-Choele, in the Territory of Rio Negro, was started in January, 1911. Construction is expected to be commenced during 1911 on a line to run from Caiman to Paso de los Indios, a town on the Chubut River in the Territory of the same name. Operations were also pushed on the line from Bahia Blanca to Carmen de Patagones, so that when all these routes are completed the vast expanse of southern territory of Argentina will be opened up for development and colonization, and new port works will no doubt be inaugurated in order to prepare for the increased commerce which is sure to follow. The extension of the Great Southern Railway from Neuquen toward the Andes is also being pushed, and at the close of the year the line had been completed to within 170 miles of the Chilean railway system.

The most important event of 1910 was the opening of the tunnel through the Andes, thus completing connection by rail between Buenos Aires and Valparaiso, Chile. A tri-weekly train service was established in April between these two points, the schedule time for the trip being 38 hours. Work having been finished during the year on the Argentine line to Posadas and on the Central Paraguay Railway to Encarnacion, passengers can now proceed by rail from Buenos Aires to Asuncion, the only change necessary being made at the ferry between Posadas and Encarnacion. It is expected that by the fall of 1911 a train ferry will have been completed between these two points, when a through train service will be inaugurated, the gauge of the Paraguay Central having been changed to that of the Argentine North Eastern. When the line which has been surveyed from Tupiza, in Bolivia, to Quiaca, on the Argentine frontier, shall have been completed, the capital of Argentina will be in direct communication with those of two more of her sister Republics.

Concessions have been granted by the Government for several lines in the north to be constructed toward the Chilean frontier. One of these will start from Salta, and run to Antofagasta by way of Huatiquina, work on which will begin in October, 1911; another commences at Tinogasta, in Catamarca; while a third will extend from Chilecito, in the Province of La Rioja. When these lines and those in the south have been completed and the connecting links necessary to unite them with the Chilean railways have been finished, the two Republics will be bound together by six or more bands of steel, and the products of both countries will be interchanged much more freely than at present.

In addition to the construction of new lines and branches of old ones, great improvements were made on the great trunk routes. A new rapid service was inaugurated between Buenos Aires and Rosario in September, the journey now only requiring five hours. The Government also issued a loan of some $6,000,000 for the extension of its roads in the Provinces of Entre Rios and Corrientes. A new railroad, the Rosario and Western, was registered in London, having for its object the construction of a road in the Province of Santa Fe.

Electricity is also playing a part in the improvement of the railways of the Republic. Plans have been approved by the Government for the electrification of the Central Argentine line between Retiro and Tigre, and an electric line is to be built between the capital and the city of La Plata.

Buenos Aires has nine street railway lines, all of which are now operated by electricity. La Plata, Rosario, and Santa Fe also have street railways, the two former having been electrified, while a number of other cities have arranged to install systems to be operated by the same means.

The Argentine Republic has one great system of interior waterways developed. The lengthy stretch of the Parana River from the Rio de la Plata to its junction with the Paraguay flows through Argentine territory, and this stream is utilized for an immense and constantly growing traffic within the interior of the country, as well as for a general commerce reaching into the Republics of Paraguay and Brazil. Constant and regular communication is maintained between Buenos Aires, Asuncion, the capital of Paraguay, and Corumba, practically the head of navigation in Brazil. Tributary to the Paraguay are the rivers Pilcomayo and Bermejo, on which only shallow-draft vessels are employed, but which are susceptible of improvement when the increase of commerce shall demand it. The rivers entering the sea south of Buenos Aires are of great benefit to the region through which they flow, but no decided commerce has as yet been established upon them. Communication is established between the capital and all ports on the Atlantic coast as far south as Punta Arenas, Chile, by steamship lines having regular sailings.

THE PRESS OF ARGENTINA.

Although printing was introduced into the region of the River Plate late in the seventeenth century by the Jesuits, in Argentina no trace of the art earlier than 1780 can be found. The press, as the word is understood, did not appear in Buenos Aires itself until 1801, when, on April 1, the first genuine periodical publication—El Télegrafo Mercantil—was issued. This paper, of only eight small pages, was supposed to come out twice a week, but it was soon succeeded by a weekly, devoted to agriculture and commerce. During the stirring times of the revolution newspapers came and went with rapidity and confusion, developing the intellectual and literary merit of many of the heroes of Argentina. While Rozas dominated the country the press disappeared, but promptly revived when his hold on the Government was lost in 1852.

Modern periodical history begins with El Nacional, edited by such men as Sársfield and Sarmiento, and founded immediately after the above event. A host of newspapers followed, eager to give voice to the exciting times of the constructive politics of the day. The two great and world-renowned dailies of Buenos Aires, La Presna and La Nación, were first issued on October 18, 1869, and January 1, 1870, respectively, and have ever since maintained the traditions of the best art of journalism in respect to outspokenness, impartial criticism, and news service. The first English newspaper in South America was issued in Buenos Aires as the Standard in 1861, and has grown in importance commensurate with the English-speaking colony. Dailies or weeklies to represent other nationalities have been founded from time to time as their interests demanded.

In 1910, the centennial year of Argentina, there were in the Republic 482 periodicals, of which 422 were Argentine, in Spanish; 22 Italian; 12 Spanish (for the Spanish residents of the country), 8 French, 8 English, 8 German, 1 Danish, and 1 Arabic. Among them were 70 dailies, 16 appearing three times a week, 44 twice a week, 191 once a week, 4 every 10 days, 53 every 15 days, 64 every month, 2 every three months, 11 once a year, and 27 irregularly. In the Federal capital 225 papers were listed, with editions, besides the languages mentioned, in Syrian, Basque, Swiss-French, Swedish, and Hebrew. Many of these papers are illustrated, and in artistic typographical work will compare favorably with European or American papers of the same character. From the most profound discussions on philosophic and political problems to the ephemeral wit of the comic supplement, they do not lag behind their foreign contemporaries, and not a few of them are as much institutions to the reading public of Argentina, and even of Spanish America, as are Punch, Fliegende Blaetter, and Le Rire in Europe. These publications are diversified as to topics; the majority of them are newspapers in the current sense of the word, but some are devoted to religion, some to art, literature, finance, commerce, society, agriculture, science, or sport.

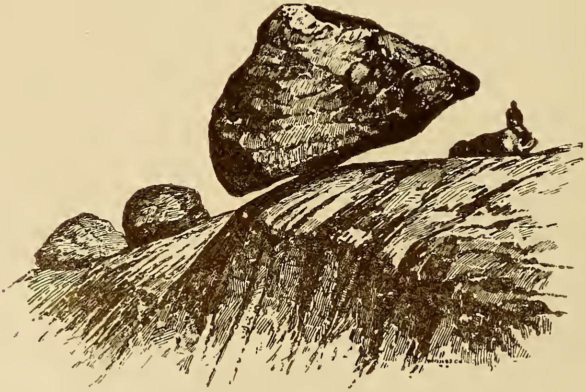
The size of the metropolitan dailies is approximately that of the popular newspapers of New York and London. Some of them have 32 pages, others less. The weeklies and trade periodicals are also of the regular size of such papers in other parts of the world, although occasionally unusual sizes are to be found, as a distinctive feature of the individual sheet. The number of pages of any edition depends largely upon the amount of advertising matter printed, and on this point travelers visiting Argentina, or those whose attention is for the first time called to advertising conditions in the Republic, are astonished, and would consider the statement below incredible if it were not easily demonstrable as a fact.

Of the best known morning and evening papers, 8 to 32 pages form one issue. Of these, sometimes as many as 16 pages are entirely given over to advertisements. These are exactly of the same character as may be noted in London or New York dailies—real estate sales, department stores exhibits, special articles for sale, bargains of all kinds, situations wanted, excursions, and entertainments—everything denoting the heterogeneous desires and ambitions of a highly active, industrious community. Frequently these advertisements are illustrated, even in the dailies, but in the weeklies of a popular class almost all carry pictures which show graphically the value of the thing advertised, and the artistic merit of these illustrations is nowhere excelled. Advertising is indeed a feature of Latin-American newspapers, whether of Argentina or other Republics. The people are fond of the printed page, and if they do not read they can at least admire and have their curiosity aroused, which is the first step desired by the advertiser. No better medium can be found by an advertiser, therefore, than the periodic press of Argentina.

Their circulation also should be noted. Of the best known morning papers, like La Prensa, La Nacion, and La Argentina in Buenos Aires, a daily circulation of 150,000 copies is the rule, and this extends not only in the city itself and throughout the country, but also into other Republics—Uruguay and Paraguay, near at hand, Brazil and Chile, on opposite sides of the continent, and even into Peru, Bolivia, and farther north still. Such alert afternoon papers as La Razon distribute 50,000 copies. The Standard and Buenos Aires Herald, English in language and make-up, both dailies, are satisfied with a circulation of from 14,000 to 20,000, but this includes not only the English-speaking settlement of Buenos Aires, but also practically the entire English-speaking colony of the region of the River Plate. Other popular but more specialized publications, like the Buenos Aires Handelszeitung, in both German and Spanish, have an ordinary circulation of about 10,000.

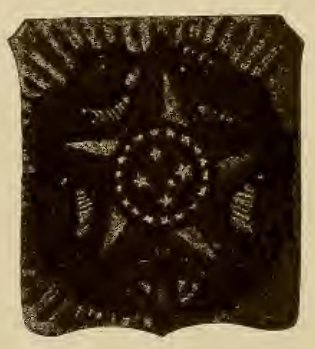
Since advertising is so well developed in Argentina, the advertising rate must be commercially well established. This varies according to the paper and to the position occupied by the advertisement. In some papers the cost per column inch, each insertion, is about 50 cents gold; in other more popular papers this advances to $2.75; as high as $396 gold a page is the price of some papers. Circulation and artistic printing control the rate in Argentina as well as in the United States, but it may be added that the returns are commensurate with the investment, there and elsewhere.

For the industrial and commercial world of to-day these questions of newspaper lists, circulations, and advertising rates are important. They are attracting more and more attention from business men who realize the advantage of getting into close touch with consumers in Latin American Republics, and several of the managers of large papers in the capitals have established agencies in the United States, through whom direct arrangements for advertising can be made. These can be furnished to those who wish them from the files of the Pan American Union. Also, in cases where no agencies are locally available, selected lists of newspapers in various localities or general lists for any one Republic as well as for all Latin America, with approximate circulation and advertising rate, can be obtained by applying to the Pan American Union, which has been at some pains to arrange such lists as serviceable as possible.



BRAZIL

The United States of Brazil is the second largest of the American Republics. It has an area of 3,218,130 square miles, or about 250,000 square miles greater than the United States of America excluding Alaska, with a population (1907) of 20,515,000, equal to 6.4 per square mile. Lying entirely within the Temperate and Tropical Zones, the climate of a considerable area is nevertheless modified by the numerous high tablelands and mountain chains, as well as by its vast and extensive hydrographic system. The fertile plains produce all of the fruits of the Tropics and contain almost impenetrable forests. Coffee and rubber are exported in large quantities, while hides, maté, cacao, and tobacco are also extensively shipped. Besides rubber trees the forests contain a great variety of useful and ornamental timber and medicinal plants. Manganese, iron, gold, and other metals are found, and it is one of the few countries possessing diamond mines.


COAT OF ARMS OF BRAZIL.

Under the constitution adopted February 24, 1891, the Republic is a federal union of states, republican and representative. The Government is divided into legislative, executive, and judicial branches. The legislative power is vested in the National Congress which consists of the Senate and the Chamber of Deputies. The Senate has 63 members, 3 for each State and 3 for the Federal District, elected by direct vote for a term of nine years, but is renewed by thirds every three years. The Chamber of Deputies has 212 members, elected for a term of three years in the same manner as the senators and in the proportion of 1 for every 70,000 inhabitants. No State, however, is represented by fewer than 4 deputies. Congress meets regularly every year on May 3 for four months, but may be prorogued or called in extra session by the President. All male citizens over 21 years of age are entitled to vote.

The executive power is vested in a president, who receives a salary of 120,000 milreis (about $36,000) gold per annum, assisted by a cabinet of 7 ministers, which he appoints. The President and Vice President are elected for a term of four years by direct vote, and may not be reelected for the term immediately following their own. The President, Vice President, and Cabinet are as follows:

President: Marshal Hermes da Fonseca (inaugurated Nov. 15, 1910).

Vice President: Dr. Weneslão Braz Pereira Gomez.

Minister of Justice and Interior: Sr. Rivadavia Correa.

Minister of Foreign Affairs: Baron do Rio Branco.

Minister of Navy: Admiral Baptista Leão.

Minister of War: General Dantas Barretto.

Minister of Communications and Public Works: Dr. J. J. Seabra.

Minister of Finance: Sr. Francisco Salles.

Minister of Agriculture, Industry, and Commerce: Sr. Pedro Tolledo.

The members of the Cabinet are responsible to the President only and not to Congress.

The Department of Justice and Interior (Ministerio da Justicia e Negocios Interiores) maintains relations with the various States, has charge of the administration of the National Territories and of the Federal District, the public health, sanitation of ports, the Federal courts, and such schools and institutes as are maintained by the Federal Government, such as the Polytechnical School, National School of Medicine, National Institute of Music, National School of Fine Arts, National Library, the Oswaldo Cruz Institute, etc.

PRESIDENT HERMES DA FONSECA.

The Department of Foreign Affairs (Ministerio das Relaçãoes Exteriores) is intrusted with the maintenance of cordial relations with foreign nations, through the diplomatic and consular corps, the negotiation of treaties, settlement of international disputes, international and national expositions, etc.

The Navy Department (Ministerio da Marinha) controls all matters pertaining to the Navy, the numerous naval apprentice schools in the various States, the Naval College, the Library of the Navy, and the Museum of Naval Warfare.

The War Department (Ministerio da Guerra) has charge of the standing army, also the recruiting and training of conscripts, and the various training schools for that purpose, the military college at Rio de Janeiro, the military school at Porto Alegre, the artillery school, various schools for training officers, two powder factories, a cartridge factory, etc.

The Department of Communications and Public Works (Ministerio da Viação e Obras Publicas) controls the railways, both Government owned and private, the post offices, national telegraphs and wireless

"PRACA DA GLORIA"—A BEAUTIFUL SQUARE IN THE CITY OF RIO DE JANEIRO.

The splendid public park system is one of the most notable features about Rio. The extent of the gardens belonging to the municipality is 507,000 square meters. In addition, the Federal Government maintains large botanical gardens.

stations, construction and maintenance of ports, irrigation works undertaken by the National Government, the waterworks, sewerage, and drainage of the capital and of towns in the National Territories, as well as public buildings and other public works undertaken by the Federal Government.

The Finance Department (Ministerio da Fazenda) has charge of the collection and disbursements of the national funds, the preparation of the annual budget, and the service of the public debt. The following bureaus and divisions are under its control: The Federal Treasury, customhouses, national laboratory, conversion office, national printing office, "Diario Official," bureau of commercial statistics, bureau for inspection and control of insurance companies, amortization office, and the Bank for Savings and Loans.

The Department of Agriculture, Industry and Commerce (Ministerio da Agricultura, Industria e Commercio) has charge of all matters pertaining to these subjects. Among its numerous sections are the national observatory, meteorological bureau; bureau of statistics; botanical garden of Rio de Janeiro; national museum; commercial museum; the lodging house for immigrants; the iron foundry at São João do Ipanema in the State of São Paulo; the divisions of colonization and immigration, geology and mineralogy, and agriculture, the latter having four agronomic stations and a number of experimental farms; the commission for the economic development of Brazil, which publishes pamphlets and data regarding the resources of Brazil and maintains agencies in Europe and America for their distribution; and the Federal Zootechnic Institute.

The judicial power is vested in the Federal Supreme Court, and there is a federal judge in each State. The former court is composed of 15 justices, appointed by the President with the advice and consent of the Senate, while the federal judges are appointed upon recommendation of the Supreme Court. All of these judges hold office for life.

The peace strength of the regular army, which varies according to the budget, is about 30,000 men. As military service is compulsory from the 21st to the 45th year, the war strength of the Republic probably exceeds 300,000 men. The navy consists of some 31 vessels, with a complement of 7,730 men.

There are now in the Republic over 3,000 post-offices. During 1910 the number of Federal telegraph stations was increased to 629; in addition to these, there are 1,514 railroad stations whose telegraph offices work in connection with the Federal lines. The Government is also giving a great deal of attention to the establishment of a complete wireless system which will allow communication from the extreme northern part of the country to the extreme southern section.

The Union is composed of 20 States, 1 National Territory, and the Federal District. The States are entirely autonomous in their

A "BUTTRESSED" TREE ON THE BANKS OF THE AMAZON.

While it is known that the forests of Brazil are rich in valuable hard woods, they are so vast in extent and the flora so slightly known that botanical investigation will have free scope in this practically unlimited field for many years to come.

interior administration, even to the extent of levying their own export duties. The Federal Government alone is entitled to collect import duties, stamp taxes, postal rates, etc. The Federal District, which includes the capital, Rio de Janeiro, is governed by a prefect appointed by the President. The prefect is assisted by a municipal council elected by the people.

BRAZIL IN 1910.

The relations of the Republic with other Governments remained cordial and peaceful during the year. Besides sending representatives abroad to the celebrations held in commemoration of a centenary of independence, or for special gatherings of an artistic, educational, or industrial nature, Brazil had the honor and pleasure of entertaining in an official manner the President-elect of the Argentine Republic, who was on his way home from a visit to Europe.

Brazil was the first nation to recognize the Republic of Portugal, proclaimed on October 5, 1910, as word to that effect was sent to that new Government on October 22, 1910.

In political matters an important event of the year was the election, in March, of Marshal Hermes da Fonseca to the presidency, and the people of the Republic took part most heartily and understandingly in the constitutional proceedings by which the act was accomplished. After the election Marshal da Fonseca paid a visit to Europe, returning to his own country for the date of his inauguration into office, November 15.

As to the boundaries between Brazil and Peru, and Brazil and Uruguay, the exchange of ratifications took place in April and May, respectively; in October boundary demarcations between Brazil and the Argentine Republic were signed and in February an agreement was arranged concerning the boundary demarcation between Brazil and Bolivia. Somewhat similar ratifications were with Colombia in August, negotiations completing the frontier with British Guiana were initiated, and an agreement with Bolivia relating to a branch of the Madeira-Mamore railway was concluded.

In comparing the revenue for 1910 with the expenditure, a deficit is noticeable, and the Government has taken steps to neutralize this for the following year. As regards the rate of exchange, which for some time past has been maintained on a basis close to 15d (about 30 cents gold) per milreis, unusual conditions after the middle of the year caused fluctuations which raised the exchange to about 37 cents gold, but this was too high to be maintained, and therefore a rate of 16d (about 32 cents gold) was established, at which the milreis was quoted when the year closed.

Commercially, the year 1910 showed the highest total of foreign trade in the history of the Republic. Exports exceeded imports, but not to the same relative extent that was the case in 1909, for in

1910 the imports showed a remarkable increase over those of the year before. Coffee fell from 52 per cent of the total of 1909 to only 41 per cent in 1910, while rubber advanced from 30 per cent in 1909 to 40 per cent in 1910. Other leading articles exported in 1910 retained about the same place they had before. The value of goods imported into Brazil from the United States exceeded those of any previous year.

Brazil in 1910 increased the railway mileage a greater amount than in any other preceding year, the increase being 1,162 miles. Moreover, this gain represents certain advantageous factors that must attract general interest to the advance the Republic is making in the ambition to link the coast cities by railway as well as by steamer communication, and also to extend the interior communication so that the immense and fertile interior may be opened to development. The most striking point resulting from this added mileage is the fact that it made possible a continuous trip by rail from Rio de Janeiro, the Brazilian capital, to Montevideo, the Uruguayan capital. As yet this is not a commercial route, but within a short time passenger travel will be facilitated, and much hitherto rather isolated territory in Brazil will be accessible. Another feature is that Rio de Janeiro has been placed in touch at the north with the city of Victoria, the capital of the State of Espirito Santo. Thus rails are laid for one-third the distance between the mouth of the Rio de la Plata and the mouth of the Amazon. Encouragement was given during the year to the plans to extend railway systems westward across the Republic to the Iguazu Falls on a branch of the Alto Parana River, and to the boundary of Paraguay, where connection is to be made with its capital, Asuncion. As interior development of this character attracted attention during the year, so did other industrial matters, and especially was encouragement given to make practical use of the immense natural deposits of iron ore in the country. The avowed policy of the Republic is to foster native industries as much as possible.

The number of immigrants registered as entering Brazil during the year was 88,564, which is above the average for the past 10 years, but below that of the decade preceding. The principal nationalities were Portuguese, Spanish, Italians, Germans, Russians, Turkish Arabians, French, Austrians, and British, with a few Dutch, North and South Americans. The Government, while encouraging immigration by all wholesome means, has decided to adopt the policy of granting free land, under careful restrictions, as is done in the United States, rather than of the means employed hitherto.

In the progress along educational lines, late reports show that there are over 11,000 primary and nearly 330 secondary schools, with a total attendance of approximately 600,000 pupils.

Other Federal plans, like that of the national drainage systems in the north, of port works for the better known harbors along the coast and of agriculture and sanitation, education, and general intercommunication by post and telegraph, made satisfactory progress during the year. One of the most far-reaching of these plans is that for the establishment of a steamship line between Rio de Janeiro and New Orleans. The name of this line is the Mississippi Valley, South America & Orient Steamship Co., to be known as the Pan-American Mail. Four new first-class steamers are to be chartered in London and will probably begin service in September, 1911, but its own steamers will be built for permanent service in the United States.

FINANCE.

According to the message of President da Fonseca, transmitted to the National Congress on May 3, 1911, the ordinary receipts of the Federal Government for the year 1910 were 113,098,131$815 gold, and 346,014,121$399 paper, and the expenditures, as already accounted for (realizada), to 98,547,187$770 gold, and 427,231,723$295 paper. These figures show a surplus of 14,550,994$045 gold, and a deficit of 81,217,601$896 paper. In the message the gold surplus is converted into paper on the basis of 16d. sterling exchange, producing 24,554,718$000 and thereby reducing the deficit to 56,662,883$896 paper.

The value of the Brazilian gold milreis is 27d. sterling, or approximately 55 cents United States gold. The paper milreis during the year 1910 fluctuated in value from about 15d. to about 18¼d. with an average during the year of 17d. Near the end of the year legislation was effected in connection with the Conversion Office by which the convertible value of the paper milreis was made effective at 16d. sterling.

Converting the figures above into United States values on the basis of gold milreis worth 55 cents United States (27d.), and paper milreis 32.5 cents (16d.), the ordinary Brazilian receipts would amount to $174,658,561.95, and the gold surplus to $8,003,046.72, and the paper deficit to $26,395,720.61, leaving a net deficit of $18,392,672.89.

The statement of receipts made by President da Fonseca is approximate, and is as follows:

Receipts.	Gold.	Paper.
Already accounted for	104,593,169$261	302,217,710$836
Not yet accounted for	8,504,962$554	43,796,410$563
Total, including excess of deposit	113,098,131$815	346,014,121$399
Budget estimate	104,403,860$220	313,118,400$000
Excess of actual receipts over estimates	8,694,271$595	32,895,721$399

Speaking of the financial situation, Marshal da Fonseca says:

"Among affairs claiming special attention from the public authorities of the Union, the financial situation stands out prominently.

"I feel under an imperious duty to place before the National Congress with the utmost frankness the state of the public finances, hoping from its patriotism and wisdom there may be found an effective remedy for a situation which ought not to be longer prolonged.

"The financial year 1908 closed showing a deficit of 4,548,789$293 gold, and of 12,613,469$938 paper; that of 1909 was liquidated with an excess of expenditures amounting to 15,694,212$534 gold, and 19,994,342$325 paper. The financial year 1910 in like manner did not escape the influence of this tendency to increase the expenditures, making greater the want of balance between receipts and disbursements, which so far as already known shows a deficit of considerable importance amounting to 56,662,883$896 paper. The outlook of the current fiscal year seems to me much graver yet, unless imperative measures are promptly undertaken by the legislative authority to reduce the excessive expenditures already decreed and now in process of execution. A minute study undertaken by the Treasury of the estimates of the present year (1911) leads to the expectation of a deficit greater than that of the preceding year."

In the matter of the receipts and disbursements for 1910, the message gives the following amplifications:

"Computing other resources such as operations of credit of 35,964,218$961 gold, the proceeds of external loans intended for the construction of the Ceara and the Itapura to Corumba Railways, and the sum of 105,354,192$178 paper resulting from the issue of internal bonds for the acquisition and construction of railways and for the payment of Bolivian claims, as also the conversion of gold balances into paper, the total of receipts is very much increased. With these resources the receipts amount to 149,062,350$776 gold, and 451,368,313$577 paper." (This represents the extraordinary receipts added to the ordinary receipts, as given in the first paragraph of this article.)

"The expenditures already made, as known and entered on the books of the Treasury and from other fiscal sources, according to reports received, amount to 98,392,806$485 gold, and 427,129,523$295 paper. To these expenditures adding the deficit in gold deposits of 154,381$285, the conversion into paper of 42,519,513$261 gold, and also 102,239$600 paper for redemption of paper money and copper coin, the total of expenditures reaches the sum of 141,066,701$031 gold and 427,231,762$895 paper.

"Balancing the total receipts, including the operations of credit of 149, 062, 350$776 gold, and 451, 368, 313$577 paper, with the total expenditures amounting to 141,066,701$031 gold, and 427,231,762$895 paper, there remains a surplus of 7,995,649$745 gold and 24,136,550$682 paper, which being approximate may be hereafter modified. Taking into account the receipts properly covered by the budget which were 113,098,131$815 gold, and 346,014,121$399 paper, and the disbursements already made of 98,547,187$770 gold, and 427,231,723$295 paper, there results a surplus of 14,550,944$045 gold, and a deficit of 81,217,601$896 paper. Converted into paper at an exchange of 16d. the surplus in gold amounts to 24,554,718$000, which reduces the paper deficit to 56,662,883$896. This is the actual result of the receipts and expenditures of the fiscal year 1910, subject, however, to modifications on final liquidation."

The account of receipts and expenditures for the year 1909, as finally liquidated in the treasury, is as follows:

RECEIPTS.

	Gold.	Paper.
Ordinary receipts to be specially applied	85,798,145$162	284,941,342$786
Balance of deposits	474,469$841	180,777$161
Conversion of specie into paper		49,883,871$498
Emission of internal bonds for railway purposes (Decree Feb. 4, 1909).		18,086,000$000
Total	86,272,615$003	353,091,991$445

EXPENDITURES.

By the several departments	73,276,349$141	371,076,054$580
Gold converted into paper	28,690,478$396	
Redemption of paper currency and old coinage		2,010,279$190
Total	101,966,827$537	373,086,333$770
Receipts as above	86,272,615$003	353,091,991$445
Deficit	15,694,212$534	19,994,342$325

PUBLIC DEBT.

The foreign debt on December 31, 1909, as stated in the message of the President, amounted to £75,051,257 9s. 9d., and 140,000,000 francs. It had increased on December 31, 1910, to £77,331,757 9s. 9d., and 240,000,000 francs. "This difference," says President Fonseca, "results from having increased the debt by a loan of £10,000,000 contracted for the conversion of the 5 per cent obligations into 4 per cent, and the construction of the new system of railways in Ceará. At the same time a decrease was made by the conversion of the 1893 and the 1910 5 per cent loans to the amount of £6,249,500, and the redemption of the foreign loan to the amount of £1,470,000. Therefore the foreign debt was increased by £2,280,500, and in addition by 100,000,000 francs the latter secured for the construction of the Goyaz Railway."

On December 31, 1910, the internal debt amounted to 591,750,600$000, paper. During the year bonds were issued to the amount of 28,140,000$000, paper, in connection with the construction and acquisition of different railways and the payment of claims adjudicated by the Brazil-Bolivian Arbitration Tribunal. Bonds of the gold issue of 1879, to the value of 20,548,000$000, were redeemed, and other bonds of the issue of 1897 to the amount of 6,000,000$000 were drawn for payment.

The paper money in circulation on March 31, 1911, amounted to 617,672,193$500, a reduction of 10,780,538$500 made during the year 1910.

COMMERCE.

The foreign commerce of Brazil for the year 1910 and the two preceding years, according to the message of President Hermes da Fonseca, presented to the National Congress on May 3, 1911, was as follows:

[Values given in milreis paper.]

	1908	1909	1910
Imports	567.271:636$	592.875:927$	713.803:143$
Exports	705.790:611$	1,016.590:270$	939.413:499$
Total	1,273.062:247$	1,609.466:197$	1,653.216:642$

The above table does not include the specie movement for the years referred to. This, according to the President's message, was as follows:

	1908	1909	1910
Money imports	2.665:429$	140.895:216$	145.014:303$
Money exports	330:859$	181:795$	32.509:452$
Total	2.996:288$	141.077:011$	177.523:755$

During the year 1910 there was considerable fluctuation in the value of the paper milreis, reaching at the lowest point about 15d and rising in October to about 18¼d sterling.

According to the report of United States Vice Consul General J. J. Slechta, made on April 1, 1911, the total value of the Brazilian foreign trade, not including specie transactions, was $545,581,275 United States gold, divided into imports, $235,574,837, and exports, $310,006,438. It will be seen that Mr. Slechta has taken as a basis of conversion a figure nearly 17d sterling, or a little over 33 cents United States gold, which would be approximately about the average exchange for the year.

The imports for the preceding year were $179,690,125, which shows an increase for 1910 of $55,886,712. The exports for the year 1909 were $308,331,829, which shows an increase for 1910 of $1,674,609. The balance of trade was $74,431,601, as compared with the balance of trade of the preceding year of $128,641,704, or a loss of over $54,000,000, which is accounted for by the large increase in imports for the year 1910.

IMPORTS.

The imports by countries of origin for the year 1910 and for the two preceding years are as follows: (Figures in this table and in the tables following for the year 1910, are all taken from Mr. Slechta's report.)

	1908	1909	1910
United Kingdom	$49,845,953	$48,241,287	$67,061,065
Germany	25,699,036	28,007,001	37,455,530
United States	20,954,352	22,265,534	30.253,918
France	15,595,251	18,610,398	22,268,307
Argentine Republic	17,531,222	17,922,587	20,133,472
Portugal	8,952,346	9,994,615	13,103,860
Belgium	8,077,520	7,280,007	10,655,097
Uruguay	5,337,724	6,294.057	6,102,206
Italy	5,872,446	5,236,557	7,503,410
Austria-Hungary	2,770,351	2,365,825	3,346,811
Newfoundland	2,470,363	2,008,641	2,707,328
Switzerland	1,704,493	1,963.169	2,911,669
Netherlands	940,295	1,748.977	1,390,348
Spain	1,590,382	1,522,001	2,000,276
Norway	1,510,047	1,504,933	1,976,849
Canada	1,137,612	953,523	1,159,679
Miscellaneous	3,030,256	3,771,013	5,545,012
Total	173,017,849	179,690,125	235,574,837

The only two countries in the above table showing a decrease in Brazilian imports were the Netherlands, 25.7 per cent, and Uruguay, 1.5 per cent. All the others show increases, the principals of which are Switzerland, 48.3 per cent; Belgium, 46 per cent; Austria-Hungary, 43 per cent; United Kingdom, 39.7 per cent; United States, 36 per cent; Newfoundland, 35 per cent; Germany, 30.2 per cent; Italy, 30 per cent; Portugal, 23.8 per cent; France, 16.3 per cent; and the Argentine Republic, 11.6 per cent.

The principal articles of importation and the leading countries from which received in 1910 were as follows:

Raw materials and articles for use in the arts and industries.—Cotton yarn, $851,679, of which $400,936 from the United Kingdom, $234,894 from Germany; sewing thread, $2,488,344, of which from United Kingdom, $2,345,981; thread, not enumerated, $51,868; steel bars and rods, $636,283, of which from the United Kingdom, $284,875, Germany, $125,169, United States, $86,931; iron bar, rod, plate, and sheet material, $1,313,220, of which from Germany, $482,744, United Kingdom, $395,609, United States, $39,177; linen, raw and prepared for weaving, $19,910, of which from United States, $15,947; staves and hoops, $146,035, of which $51,465 from the United States; pine lumber, $2,040,730, of which $1,754,854 from the United States, $162,791 from Sweden; turpentine, $215,601, of which from the United States, $201,747; asphalt, $253,941, of which from Spain, $90,785, Germany, $59,560, United States, $43,006; coal, $11,737,701, of which from the United Kingdom, $11,314,229, United States, $365.527; cement, $3,374,247, of which from Germany, $1,379,933, United Kingdom, $1,079,712, United States, $7,240; leather, $3,268,273, of which from Germany, $1,220,179, France, $1,122,602, United States, $487,131; vegetable extracts, $472,970, of which from the United States, $218,784; rosin, $986,551, of which from the United States, $974,000.

Manufactured products.—Carpets, oilcloths, etc., $223,265, of which from Germany, $100,290; cotton goods, bleached cotton, $2,026,654, of which from the United Kingdom, $1,875,011, United States, $18,230; prints, $1,949,060, of which from Great Britain, $1,832,345, United States, $15,307; dyed, $4,773,448, of which from the United Kingdom, $4,236,420, United States, $102,127; cotton goods not specified, $3,165,369, of which from the United Kingdom, $1,098,288, Germany, $1,024,071, United States, $239,738; artillery ammunition, $1,854,076, of which $1,842,385 from Germany; small-arms ammunition, $928,591, of which $624,269 from the United States, $117.411 from Germany, $106,756 from France; small arms, $2,116,965, of which

$911,443 from Germany, $671,000 from United States, $427,132 from Belgium; motor cars, $1,147,266, of which $417,344 from France, $287,343 from Germany, $112,682 from the United States, $108,496 from Italy, $69,534 from the United Kingdom; motor car accessories, $317,223, of which from France, $175,280, Germany, $81,474, United States, $11,487; railway cars, $2,395,291, of which from Belgium, $930,014, United Kingdom, $747,904, United States, $320,976; railway accessories, $601,016, of which from the United Kingdom, $198,807, Belgium, $184,798, United States, $110,298; carriages and other vehicles, $151,665, of which from the United States, $73,805; carriage accessories, $48,363, of which from the United States, $14,346; copper wire, $636,730, of which from the United States, $346,312, Germany, $164,740; copper manufactures, not specified, $1,496,380, of which from Germany, $590,692, United Kingdom, $372,057, United States, $139,240; small hardware, $372,575, of which from Germany, $150,095, United States, $76,541; iron wire, $2,397,346, of which from Germany, $1,239,127, United States, $531,408; corrugated iron, $1,023,362, of which from the United Kingdom, $861,750, United States, $40,650; cutlery, $1,025,509, of which from Germany, $402,285, United States, $316,147, United Kingdom, $238,970; galvanized iron, $438,398, of which from Germany, $332,254; tin plate, $147,162, of which from Germany, $103,088, United States, $18,981; nails, screws, etc., $485,953, of which from Germany, $111,993, United States, $107,744; iron and steel structural material, $2,615,677, of which from Germany, $765,996, France, $729,924, United Kingdom, $614,210, Belgium, $288,346, United States, $199,861; metal furniture, $114,545, of which from United Kingdom, $49,876, United States, $24,626; telephone and telegraph posts, $1,474,221, of which from Belgium, $574,968, United Kingdom, $446,337, United States, $186,658; steel rails, couplings, etc., $6,571,588, of which from Belgium, $3,099,013, France, $1,265,145, United States, $899,771, Germany, $701,428; tubes and pipes, $2,263,054, of which from the United Kingdom, $1,127,936, Germany, $537,510, United States, $238,144; iron and steel manufactures not specified, $3,015,802, of which from United Kingdom, $13,777,691, Germany, $1,029,753, United States, $243,357; phonographs, $351,818, of which from Germany, $175,069, United States, $134,229; pianos, $522,309, of which from Germany, $358,697, United States, $57,728; other musical instruments, $375,553, of which from Germany, $235,660, France, $40,962, United States, $19,494; surgical instruments, $283,513, of which from Germany, $102,636, France, $88,638, United States, $77,402; dental instruments, $225,063, of which from the United States, $178,445; scientific instruments, $475,571, of which from Germany, $178,352, United States, $146,780; optical instruments, $74,133, of which from France, $31,867, United States, $17,986; insulators, $90,230, of which from the United States, $37,872.

Mechanical apparatus, etc.—Electrical apparatus, $3,221,339, of which from United States $1,526,370, Germany $792,370, United Kingdom $590,355; electric cables, $561,793, of which from United Kingdom $269,179, Germany $141,736, United States $138,002; small tools, $2,516,241, of which from United Kingdom $1,260,377, United States $552,753; pumps, $239,628, of which from United Kingdom $94,252; United States $62,670, Germany $60,606; locomotives, $2,129,735, of which from United States $1,261,633, United Kingdom $522,651, Germany $295,564; stationary engines, $840,425, of which from Germany $277,233, United States $189,108; sewing machines, $1,562,354, of which from United States $977,738, Germany $512,186; typewriters, $277,702, of which from the United States $241,450, Germany $25,504; industrial machinery, $3,078,810, of which from the United Kingdom $2,025,939; Germany $514,459, United States $138,455; agricultural machinery, $512,755, of which from United States $314,128, Germany $103,098; lighthouse accessories and buoys, $40,099, of which from the United States $22,710; bicycles, tricycles, etc., $143,486, of which from United Kingdom $44,393, Germany $29,872, United States $29,012; machinery not specified, $6,002,314, of which from the United Kingdom $1,769,346, Germany $1,484,482, United States $1,378,134, France $746,008; scales, $133,680, of which from United States $52,372.

Manufactures of wood.—Furniture, $529,986, of which from Australia $210,486, United States $122,382; manufactures of wood, not specified, $321,570, of which from Germany $91,038, United States $51,110.

Cordage, rope, etc., $223,387, of which $172,283 from the United Kingdom.

Printed matter, books, etc., $771,600, of which from France $414,436, United States $18,503; miscellaneous printed matter, $506,722, of which from the United States $255,236, Germany $144,904.

Manufactures of paper.—Miscellaneous paper supplies, $1,170,368, of which from Germany $499,260, United States $51,389; writing paper, $413,438, of which from Germany $218,137; print paper, $1,654,740, of which from Germany $727,419, Norway $233,030; paper not specified, $209,777, of which from Germany $141,385.

Manufactures of leather.—Boots and shoes, $333,495, of which from the United States $168,960, Austria $104,268.

Inks, paints, etc.—Writing ink, $32,154, of which from the United Kingdom $20,982; shoe blacking, $80,407, of which from the United States $33,386; paints, $695,382, of which from the United Kingdom $391,466, Germany $128,922, United States $77,166; varnishes, $144,582, of which from the United Kingdom $89,807, United States $33,977.

Drugs and chemicals.—Calcium carbide, $594,412, of which from Norway $189,608, United States $31,956; pills, tablets, etc., $90,826, of which from United States $67,111; cod-liver oil, $27,920, of which from United States $18,557; drug products, not specified, $3,810,338, of which from France $1,159,680, Germany $982,820, United Kingdom $771,524, United States $442,754.

Miscellaneous manufactured products.—Office and school supplies, $424,653, of which from Germany $189,982, United Kingdom $105,075, United States $55,197; lighting apparatus, $526,033, of which from Germany $257,835, United Kingdom $95,970, United States $50,423; hats, $777,949, of which from Italy $410,397, France $150,643, United States $27,461; clocks, $213,248, of which from United States $126,147, Germany $66,214; dynamite, $332,441, of which from Great Britain $165,355, Germany $71,477; fireworks, $41,910, of which from China $22,750, Germany $9,408; gasoline, $304,450, of which from United States $283,953; kerosene, $4,155,460, of which from United States $3,810,800; sandpaper, $64,938, of which from the United States $22,775; lubricating oils, $848,249, of which from United States $586,297; manufactures of rubber, $208,000, of which from the United States $158,357, Germany $117,560; photographic apparatus, $182,701, of which from Germany $55,977, United States $44,811; soap, unscented, $265,259, of which from the United Kingdom $201,631, United States $31,490, Germany $18,665; watches, $278,416, of which from Switzerland $211,734, and United States $32,610.

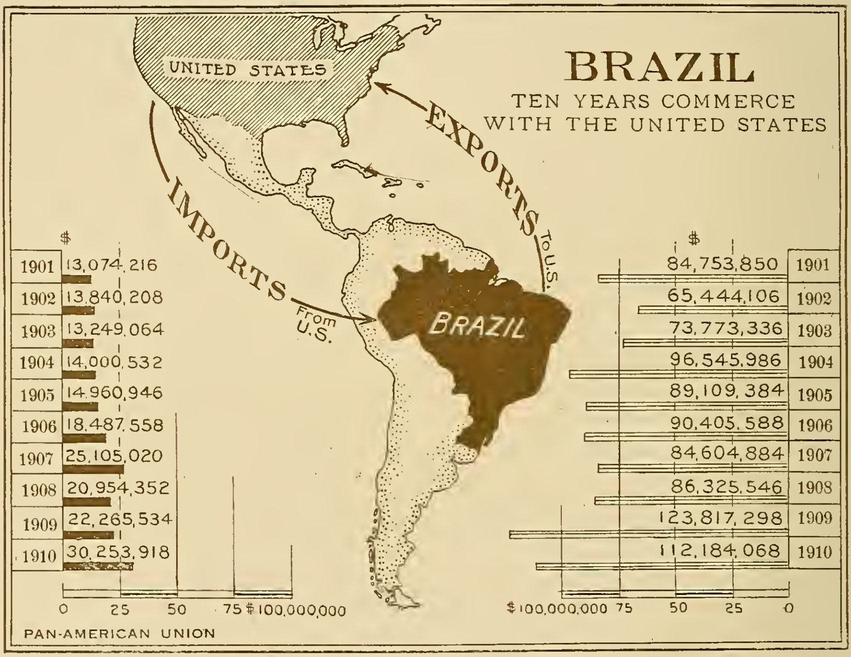
Food products.—Rice, $1,122,317, of which from India $826,371, Germany $129,544; olive oil, $1,653,355, of which from Portugal $850,850, Italy $525,850, France $471,913; codfish, $5,430,734, of which from Newfoundland $2,707,182, Norway $1,146,659, Canada $1,006,050, United States $151,606; lard, $155,830, of which from United States $119,259; potatoes, $1,047,654, of which from France $451,907, Portugal $441,436, Germany $112,365; spirits, $673,983, of which from France $295,157, United Kingdom $170,808; preserved meats, $288,531, of which from Portugal $138,838, United States $40,410; preserved fruits, $53,613, of which from the United States $31,746; preserved vegetables, $419,921, of which from Portugal $134,560, Italy $93.538, France $84,286, United States $18,870; preserved fish $1,391,863, of which from Portugal $888,258, United States $203,771; spices, $425,974, of which from India $115,611; flour, $10,101,820, of which from Argentina $6,270,266, United States $3,180,232, Uruguay $381,272, Austria-Hungary, $215,989; fresh fruit, $594,556, of which from Portugal $310,886, United States $50,747; dried fruits, $512,172, of which from Spain $189,087, France $167,187, United States $11,836; hams, $395,333, of which from United Kingdom $343,505, United States $18,640; condensed milk, $1,252,545, of which from Switzerland $1,126,546, United States $21,046; butter, $1,486,990, of which from France

$1,129,535, Denmark $344,547; cheese $936,208, of which from Italy $509,121, Netherlands $311,987; salt, $632,815, of which from Spain $428,316, United Kingdom $107,013; champagne, $251,553, of which from France $221,280; bacon, $246,432, of which from United States $207,604; wines, common, $7,258,880, of which from Portugal $4,857,800, Italy $1,717,164, France $465,211, Germany $48,300; fine wines, $2,273,312, of which from Portugal $2,161,065; jerked beef, $4,499,380, of which from Uruguay $3,440,305, Argentina $549,932.

IMPORTS FROM THE UNITED STATES.

According to the report of Mr. Slechta the increase of about $8,000,000 over the year 1909 of imports from the United States was attributable largely to the increases in the following classes of goods:

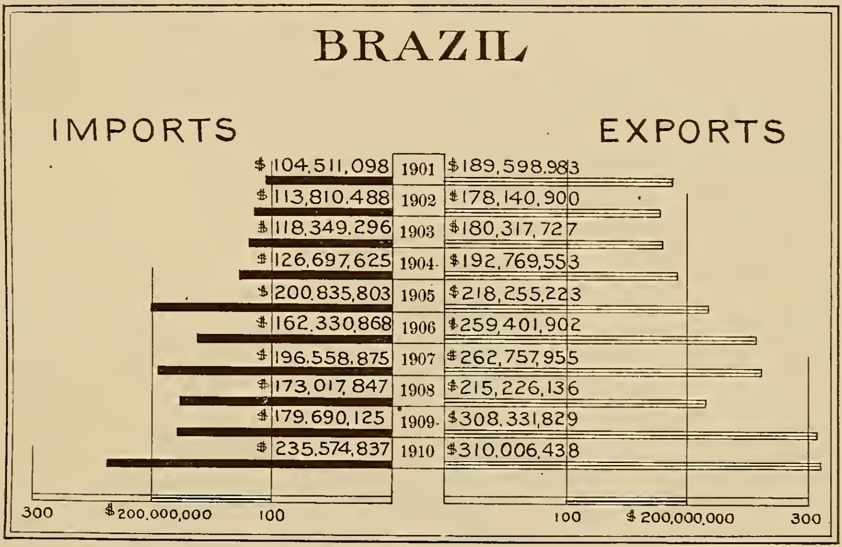
"Iron and steel for use in manufacturing, a slight increase; lumber, $400,000; turpentine, $90,000; coal, $125,000; leather, in which there was a large general gain, $180,000; arms and ammunition, $460,000; automobiles, $70,000; railway cars, slight gain from the United States, though a large general increase; copper wire and other copper manufactures, $100,000; cutlery, $110,000; iron wire, $190,000; nails, screws, and heavy construction material in iron and steel, a small increase; electrical machinery and apparatus, $460,000; locomotives, slight gain; industrial machinery, $100,000; agricultural machinery, $120,000; furniture, $50,000; boots and shoes, $50,000; clocks, more than doubled; watches, good increase; gasoline, $125,000; kerosene, $150,000; rubber manufactures, more than doubled; flour, about $1,000,000."



Mr. Slechta calls attention to the fact that although there was for the year a very large increase in the importation of cotton manufactures, the imports of this class of goods from the United States showed a falling off, and also that United States' exporters have shared but slightly in the general increase in the trade of steel rails and couplings, asphalt, manufactures of paper, and of most manufactured food products. On the other hand, he notes a large increase from the United States in the imports of several of the items included in the list of goods coming under the preferential customs reduction granted the United States, and particularly of flour. Concerning this merchandise he says:

"In quantity, the increase was from 25,712 metric tons to 40,655, and in value from $2,196,374 to $3,180,232, while the total imports increased only from 146,304 tons to 158,956 tons, and in value from $9,269,847 to $10,101,820. The United States, therefore, took all of the gain and considerably more. An analysis of the figures shows that most of the increased shipments went to the ports of Para, Pernambuco, and Bahia.

"With reference to other preferential favored products, special attention is called to the considerable increases in imports of clocks and watches, prepared paints, rubber manufactures, scales, pianos, and typewriters. The increases in these articles aggregated about $250,000, which, together with the phenomenal increase in flour imports, makes a net gain of $1,250,000 in the imports of goods on which a preferential is granted. The increase of the amount of this preferential from 20 per cent to 30 per cent in the case of flour should have a still more desirable effect upon this branch of American trade. Goods which, though favored by the 20 per cent preferential, did not show any tendency to come to Brazil in larger quantities, from the United States, are cement, dried fruits, and varnishes. The indications are that American exporters could obtain a large percentage of the trade in these articles if proper efforts were put forth. Corsets are also on the preferential list, but their importation is not given separate classification in the returns, so that it is impossible to know the exact results of the advantage in import duty given the exporters of this article."



PAN-AMERICAN UNION

TRADE BY PORTS.

The following table shows the imports for the years 1909 and 1910 by ports of entry:

Ports.	1909	1910
Rio de Janeiro	$67,625,191	$87,257,063
Santos	34,592,964	46,793,940
Para	14,864,273	20,456,054
Recife (Pernambuco)	12,762,619	16,670,954
Bahia	8,754,838	12,287,633
Manãos	9,170,833	11,582,801
Porto Alegre (Rio Grande)	6,051,310	8,017,677
Rio Grande do Sul	6,022,541	7,032,509
Fortaleza	2,060,315	3,563,896
Parangua	1,928,428	3,038,254
Maranhao (S. Luiz)	2,084,831	2,988,084
Maceio	$1,990,533	$2,334,142
Corumba (Matto Grosso)	1,997,623	1,880,150
Pelotas	1,350,484	1,586,224
Uruguayana	498,441	1,233,319
Cabedello	815,941	1,107,447
San Francisco	414,022	707,568
Victoria	618,630	653,306
All other ports	3,386,617	6,383,816
Total	179,690,125	235,574,837

Among the principal imports at Rio de Janeiro were: Coal, $6,558,628; cement; $1,492,045; leather, $1,468,528; bleached cottons, $686,751; dyed cottons, $2,038,976, cotton goods, not specified, $1,233,192; small arms, $1,062,162; motor cars, $712,000; railway cars, $744,924; copper manufactures, not specified, $609,956; iron and steel wire, $594,886; structural steel, $1,233,516; telephone and telegraph posts, $560,152; steel rails, $1,983,149; steel tubes and piping, $1,099,491; iron and steel manufactures, not specified, $1,025,585; electrical apparatus, $1,606,844; small tools, $797,040; locomotives, $953,021; industrial machinery, $1,080,305; machinery, not specified, $2,465,762; books, etc., $566,177; drugs, not specified, $1,581,280; kerosene, $843,993; codfish, $1,198,247; ordinary wines, $2,176,816; fine wines, $688,453; and jerked beef, $1,362,315.

At Santos: Iron and steel wire, $543,842; construction material, $472,231; steel rails, $1,062,680; tubes and piping, $590,111; iron and steel manufactures, not specified, $595,839; electrical apparatus, $944,175; small tools, $666,393; locomotives, $524,598; machinery, not specified, $1,052.257; drug products, not specified, $744,553; kerosene, $674,175; olive oil, $575,160; flour, $1,266,220; cheese, $485,341; common wines, $2,467,608; fine wines, $472,489.

At Recife (Pernambuco): Kerosene, $479,224; codfish, $1,751,933; flour, $1,671,203; and jerked beef, $1,534,831.

At Pará (Belem): Drug products, not specified, $457,650; flour, $1,010,427; common wines, $770,884; and jerked beef, $1,349,183.

At Bahía (São Salvador): Kerosene, $451,550; codfish, $932,746; flour, $910,638.

At Porto Alegre: Flour, $953,287.

At Manãos: Common wines, $643,833.

At Rio Grande: Steel rails, $501,473.

EXPORTS.

The exports by countries for the year 1910 and for the two preceding years were as follows:

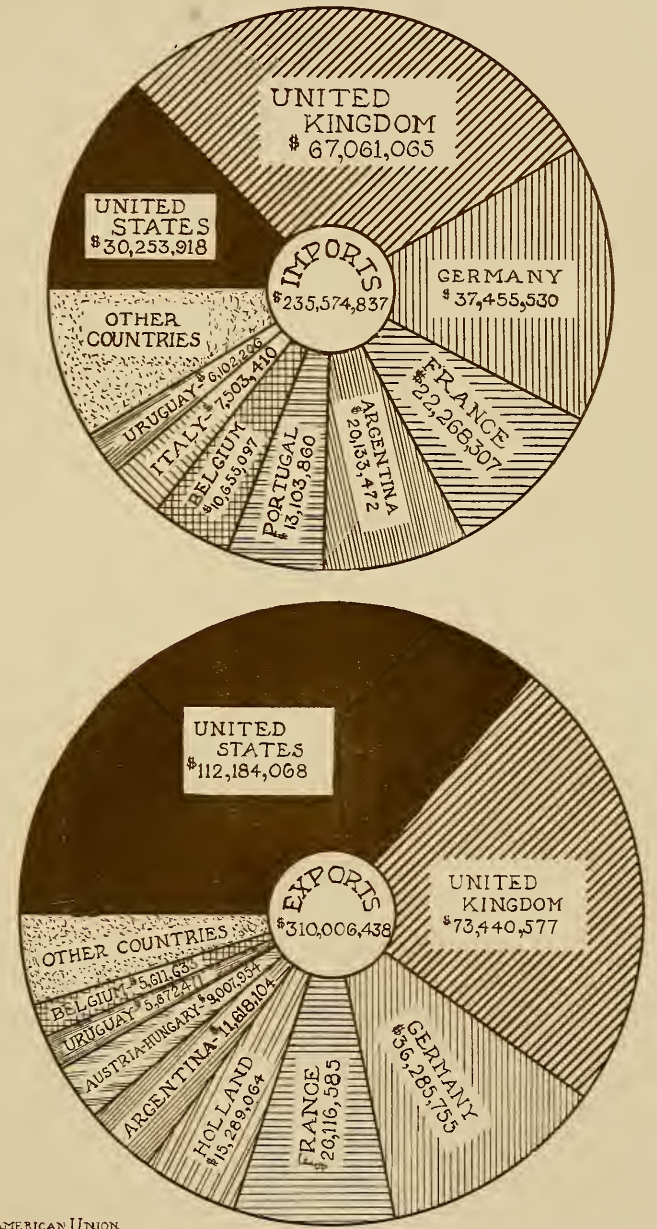
	1908	1909	1910
United States	$86,325,546	$123,817,298	$112,184,068
United Kingdom	31,793,691	49,832,180	73,440,577
Germany	33,954,673	48,130,450	36,285,755
France	16,459,949	26,514,120	26,116,585
Netherlands	9,901,775	14,390,172	15,289,064
Austria-Hungary	7,711,370	10,261,295	9,007,954
Argentina	9,043,998	10,229,459	11,618,104
Belgium	4,744,696	6,492,082	5,611,633
Uruguay	3,927,402	5,203,043	5,672,471
Italy	2,462,148	2,651,878	2,092,168
Spain	1,071,681	1,062,270	1,074,560
Portugal	947,526	905,968	834,068
All other countries	6,891,681	8,841,614	10,779,431
Total	215,266,136	308,331,829	310,006,438

Although the gain in exports amounted to about one and two-thirds millions of dollars, there were losses in exports to the United States of $11,633,228, or 9.4 per cent; to Germany of $11,884,695, or 24.6 per cent; to France of $395,535, or 1.5 per cent; to Austria-Hungary of $1,253,341, or 12.2 per cent, and to Belgium of $880,449, or 13.6 per cent. There were also losses to Italy and Portugal. The increases in exports were to the United Kingdom, $23,608,397, or 47.4 per cent; to the Netherlands, $898,892, or 6.2 per cent, and to Argentina of $1,388,645, or 13.4 per cent. There were also increases in the exports to Uruguay, Spain and to the smaller countries. The gain in exports to the United Kingdom a little more than offset the loss in exports to the United States and Germany together. The following table shows the total of exports in quantities and in values of each of the 17 principal articles for the years 1909 and 1910:

· BRAZIL ·

- COMMERCE - 1910 -

$ 545,581,275



PAN AMERICAN UNION
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	1909		1910	
	Quantity.	Value.	Quantity.	Value.
Coffee.....bags[1]..	16,880,696	$161,922,682	9,723,738	$127,212,875
Rubber.....metric tons[2]..	39,027	91,578,388	38,547	124,400,714
Hides.....do....	35,784	8,812,660	34,059	8,626,966
Yerba maté.....do....	58,017	8,025,333	59,360	9,575,550
Cacao.....do....	33,818	7,739,870	29,158	6,824,139
Tobacco.....do....	29,782	6,443,681	34,149	8,048,925
Skins.....do....	3,897	4,709,492	2,696	3,463,569
Sugar.....do....	68,483	3,247,504	58,824	3,499,732
Cotton.....do....	9,969	2,861,662	11,160	4,440,372
Bar gold.....kilos..	4,323	2,252,898	3,641	1,954,674
Manganese.....metric tons..	241,000	1,730,311	253,953	1,887,747
Brazil nuts.....hectoliters[3]..	283,606	1,493,712	210,738	1,408,286
Carnauba wax.....metric tons..	3,042	1,230,638	2,681	1,421,910
Bran.....do....	38,158	1,210,572	52,338	1,813,895
Cotton seed.....do....	33,615	711,401	27,041	639,725
Monazite sand.....do....	6,462	708,092	5,437	631,251
Precious stones.....	.....	288,212	.....	49,059
Miscellaneous.....	.....	3,364,721	.....	4,107,058
Total.....	.....	308,331,829	.....	310,006,438

[1] A bag of coffee weighs 60 kilos or 132.27 pounds.

[2] A metric ton is equal to 2,204.6 pounds.

[3] A hectoliter is equal to 2.84 bushels.

The loss in value of exports of coffee was $34,709,807. This was more than compensated for by a gain in nearly every one of the other schedules, the gain in rubber being $32,822,326.

The exports for the year 1910 by articles and countries of destination were as follows:

Articles.	Country of destination.	Quantity.	Value.
		Bags of 60 kilos, or 132.27 pounds.	
Coffee.....	United States.....	4,501,887	$58,808,467
	Germany.....	1,219,924	16,152,259
	Netherlands.....	1,077,605	14,772,522
	France.....	660,496	8,858,666
	Austria-Hungary.....	689,035	8,720,668
	United Kingdom.....	217,763	2,855,274
	Argentina.....	193,225	2,474,582
	Italy.....	136,392	1,734,834
	Other countries.....	1,027,411	12,835,603
		9,723,738	127,212,875
		Metric tons of 2,204.6 pounds.	
Rubber.....	United Kingdom.....	17,428	57,926,160
	United States.....	15,450	47,409,030
	France.....	3,445	12,485,397
	Germany.....	1,564	4,225,050
	Uruguay.....	538	1,923,900
	Belgium.....	131	428,683
	Other countries.....	1	2,494
		38,547	124,400,714
		Metric tons.	
Yerba maté.....	Argentina.....	43,779	6,988,312
	Uruguay.....	11,730	2,006,646
	Chile.....	3,786	569,120
	Paraguay.....	27	5,018
	France.....	22	3,974
	Other countries.....	16	2,480
		59,360	9,575,550
Hides.....	Germany.....	12,239	3,242,910
	British possessions.....	9,244	2,145,673
	France.....	7,199	1,557,361
	Portugal.....	1,206	466,669
	Uruguay.....	1,335	420,949

Articles.	Country of destination.	Quantity.	Value.
		Metric tons.	
Hides (continued)	United States	675	$207,274
	Belgium	1,056	205,968
	Italy	392	138,720
	United Kingdom	368	116,705
	Austria-Hungary	233	84,554
	Other countries	112	40,183
		34,059	8,626,966
Tobacco	Germany	30,711	7,210,415
	Argentina	2,712	634,920
	Uruguay	218	55,959
	Netherlands	118	28,408
	United Kingdom	81	32,587
	Other countries	309	86,636
		34,149	8,048,925
Cacao	Germany	7,758	1,863,343
	France	7,951	1,829,638
	United Kingdom	5,577	1,302,690
	United States	4,497	1,036,079
	Netherlands	1,076	252,791
	Argentina	928	214,992
	Austria-Hungary	651	151,941
	Belgium	189	47,467
	Other countries	531	125,198
		29,158	6,824,139
Cotton	United Kingdom	10,146	4,064,410
	Portugal	523	203,165
	France	321	112,212
	Belgium	129	46,458
	Spain	41	14,027
	Germany	....	100
		11,160	4,440,372
Sugar	United Kingdom	46,123	$2,598,079
	Argentina	7,568	505,902
	Canada	4,462	349,660
	United States	291	14,670
	Uruguay	245	21,173
	Other countries	225	10,248
		58,824	3,499,732
Skins	United States	1,847	2,382,827
	France	339	449,150
	United Kingdom	259	338,042
	Belgium	116	159,043
	Germany	82	121,714
	Uruguay	52	11,344
	Other countries	1	1,449
		2,696	3,463,569
Bran	Germany	44,422	1,531,556
	United Kingdom	6,121	220,543
	Belgium	1,082	37,308
	Netherlands	350	12,012
	Other countries	263	12,475
		52,338	1,813,895
Carnauba wax	Germany	1,620	856,145
	United States	611	312,002
	United Kingdom	372	220,848
	Other countries	78	32,915
		2,681	1,421,910
		Hectoliter, equal to 2.84 bushels.	
Brazil nuts	United States	145,954	996,462
	United Kingdom	53,481	343,638
	Germany	11,271	67,959
	France	32	226
		210,738	1,408,286

Articles.	Country of destination.	Quantity.	Value.
		Metric tons.	
Manganese ore	United States	59,350	$435,905
	United Kingdom	55,200	405,445
	Belgium	29,000	207,114
	Netherlands	27,100	210,004
	Germany	15,300	113,693
	Other countries	33,453	256,350
		253,953	1,887,747
		Grams.	
Gold bars	United Kingdom	3,625,536	1,945,690
	France	15,710	8,984
		3,641,246	1,954,674
		Metric tons.	
Cotton seed	United Kingdom	23,910	552,492
	Germany	1,749	47,976
	Belgium	749	23,560
	France	513	11,855
	Barbados	120	3,842
		27,041	639,725
Monazite sand	Germany	2,636	303,953
	France	1,691	195,466
	United States	1,100	130,650
	Italy	10	1,182
		5,437	631,251
Precious stones	Germany		41,390
	France		7,141
	United Kingdom		528
			49,059

The following table shows the distribution of Brazilian export trade by ports for the years 1909 and 1910:

	1909	1910		1909	1910
Santos	$130,943,928	$93,107,059	Paranagua	$2,042,443	$2,306,877
Manãos	45,750,081	60,798,670	Porto Alegre	2,230,956	2,287,457
Para	40,431,527	55,464,123	Cabedello	1,665,376	1,800,932
Rio de Janeiro	34,630,104	38,068,876	Maceio	1,522,915	1,776,649
Bahia	19,842,983	22,211,728	Maranhão	490,504	555,689
Recife	5,712,092	6,369,867	Natal	426,005	1,027,450
Antonina	3.562,936	4,708,098	Pelotas	1,991,343	492,921
Fortaleza	3,976,537	3,860,439	Florianapolis	283,729	387,690
Rio Grande do Sul	2,621,379	3,526,004	Other ports	4,929,413	5,162,033
Victoria	2,755,137	3,182,565			
Corumba	2,552,441	2,911,311	Total	308,331,829	310,006,438

The principal exports from Santos were coffee, $91,919,242, and bran, $665,989.

From Manãos: Rubber, $60,058,211, and Brazil nuts, $597,528.

From Para: Rubber, $53,989,536; cacao, $613,798; and Brazil nuts, $491,927.

From Rio de Janeiro: Coffee, $30,271,514; hides, $1,161,808; sugar, $433,936; bran, $963,331; manganese ore, $1,798,299; gold bars, $1,942,566; and monazite sand, $420,440.

From Bahia: Coffee, $1,774,694; rubber, $4,238,622; hides, $901,268; tobacco, $7,860,425; cacao, $5,981,107; and skins, $675,574.

From Recife (Pernambuco): Cotton, $2,323,653; sugar, $2,208,496; sinks, $437,819; and Carnauba wax, $611,685.

From Antonina: Yerba maté, $4,650,684.

From Fortaleza: Hides, $423,385; rubber, $1,817,866; skins, $1,123,572; and Carnauba wax, $287,407

From Rio Grande do Sul: Hides, $3,027,870.

From Victoria: Coffee, $3,005,199.

From Corumba: Rubber, $2,482,488.
From Parauagua: Yerba maté, $2,061,327.
From Porto Alegre: Yerba maté, $979,170, and hides, $856,157.
From Cabedello: Cotton, $1,019,987; and skins, $384,237.
From Maceio: Sugar, 739,807; and skins, $708,201.
From Maranhão: Hides, $312,767.
From Pelotas: Hides, $396,215.

PRODUCTS AND INDUSTRIES.

Agriculture continues to hold first place among the products of Brazil, and the industries are related closely to the agricultural rather than to other elemental factors of the country. The Republic, combining as it does one of the most immense tropical areas of the world with its interior subtropical plateau and with its fertile temperate areas in the southern States, has always relied upon the products of field and forest as a great source of wealth. The sugar in the north and the cattle in the south were known abroad 100 years ago, and as far as the simple necessities of life were concerned, Brazil has been self-sustaining since earliest times. At present, rice, cotton, sugar, tobacco, Paraguay tea, mandioca, cacao, coffee, and rubber are the principal products entering into the market, the last two forming the great export staples of Brazil.

COFFEE derives its name from the city of Kaffa in Abyssinia, in which country it is believed that the coffee trees originated. Its botanical name is *Coffea arabica*, because in Arabia it was first cultivated and exploited in the present-day use. A natural coffee plant grows into a shrub 14 to 18 feet (about 4 to 5½ meters) high, having then a long and slender trunk without branches on the lower part. The plant has thin and numerous roots growing deep into the earth, having one central root going straight down, the length of which depends upon the height attained by the plant. When cultivated, however, the shrub is generally not allowed to grow beyond 6 feet (2 meters or more) in poor sandy soil, or 8 feet (about 2½ meters) in rich soil. This restriction is imposed on the coffee tree because, when the plant is above that height, difficulties in cultivating it increase.

Healthy coffee trees produce from 12 to 16 buds, which in blooming have an exquisite perfume. Two days after full blossom the ground may be covered with white flowers, but the flowers become dark and wither in two or three days. When the leaves begin to fall, there issue from the small stems groups of seeds, at first yellow and coarse to the touch. When these ripen, they begin to take on color until they become the coffee berries, which are like very dark red cherries.

The bean in its natural state is convex on one side and flat on the other; there are two seeds in the ripe berry, side by side, each inclosed by a delicate silver-colored skin; then a tough membrane and upon that the pulp, all being covered by the outer shell.

The color and size of the berry differ very much. A measure that will hold 50 grams of water contains 187 of the dark, fine Java coffee, 203 of Costa Rica, 207 of Guatemala, 210 of Caracas, 213 of Santos, 217 of Mocha, 236 of Rio, 248 of Manila, and 313 of West Africa berry. In other words, Java beans are the largest, and those from West Africa the smallest.

Coffee improves with age. Java is not exported until six or seven years after it has been picked. Also, the drier the bean the richer cream it produces when roasted. The coffee bean as sold in the market has had the shell, the pulp, and the inner skin separated from it by mechanical processes, the machinery for which is a large portion of the expensive outfit necessary in a modern and up-to-date plantation. This makes of coffee cultivation for export a complicated business, far removed from the simple agricultural pursuit it was 100 years ago.

The practice of coffee drinking encountered for a long time the opposition of sovereigns and strait-laced society, partly on political, partly on religious grounds, but in spite of that it made its way slowly across the Old World from Arabia, through Asia Minor, northern Africa, and Turkey. The first coffee house was opened in London in 1652, and about the same time Paris took up the habit. The first coffee grown in Europe was the result of studies by French and Dutch botanists. The Dutch introduced it into Java, while the French, so it is asserted, introduced it into the West Indies.

The story goes that a Portuguese, João Alberto Castello Branco, in 1760, planted a coffee bush in Rio de Janeiro, but it was not until 50 years had elapsed that Brazil began to be famous as one of the best coffee regions of the world. During that time Java had been supreme, then the area contiguous to the Caribbean Sea, but Brazil, thanks to climate, soil, and similar factors, has finally become the great coffee producer of the world.

LOADING COFFEE AT SANTOS, BRAZIL.

Santos is the seaport of the State of Sao Paulo, Brazil, and the largest coffee-exporting center in the world. For the year 1910, the total shipments of this product from Brazil amounted to nearly $127,250,000. Of this sum, Santos is credited with about $92,000,000. This illustration shows the method of transferring the coffee from the warehouse to the wharf, each bag being stamped with the name of the shipper as the stevedore files past the entrance.

The plant flourishes best in well-watered regions, in a subtropical climate at an elevation between 1,500 to 5,000 feet (457 to 1,524 meters) and in a rich soil. All these elements Brazil has to perfection, especially in the four States of São Paulo, Rio de Janeiro, Espirito Santo, and Minas Geraes, whose combined areas cover about one-eighth of the vast domain of the Republic. From there come at least four-fifths of the production of the world.

The amount of coffee grown and consumed is enormous. In 1904 the world consumed about 2,300,000,000 pounds and produced somewhat over that quantity. Brazil is the chief coffee producer, while the United States is the chief coffee consumer, taking about one-half of the world's supply, Germany, France, Austria-Hungary, Belgium, and Holland following. Great Britain imports a great deal, but exports much of it, the consumption being only about 30,000,000 pounds. The state of Brazil in which coffee cultivation has been carried on most successfully is São Paulo, but from the beginning of 1903 no coffee trees have been planted there. This restriction has been brought about by the plan, adopted by the Government, called valorization, by which it is attempted to limit the production of coffee until consumption surpasses production, that is to say, until the world's demand exceeds the supply, the reverse of which condition has for some years prevailed.

No more beautiful sight can be imagined than a great coffee plantation during the flowering season. The trees cover the hills and table lands, and the air is laden with a delicate fragrance.

In Brazil coffee trees blossom most heavily in October, but they continue to flower more or less for several months, and the crop is harvested in May or June, each tree yielding four pounds or more of coffee. When the berry is ripe, all other work on the plantation is dropped, and every available person engages in the harvest.

RUBBER GATHERER'S HOME ON THE UPPER AMAZON RIVER.

The rubber industry is the second greatest factor in the export trade of Brazil. About one-half of the world's supply is obtained from the States of Ceara, Manaos, and Para. The total exports of this product from the entire country for the year 1910 amounted to approximately 85,000,000 pounds, valued at nearly $124,500,000.

Brazil's average crop, taking the above conditions into consideration, may be estimated as around 12,000,000 sacks (sack = 60 kilos. = 132.76 pounds), although it will rise above this when the artificial restriction is eliminated. These coffee regions of Brazil are, however, representative of the highest development of agriculture in the Republic; they will compare with the wheat and corn fields of Argentina, and with similar crop areas elsewhere. The other great natural product of the country is rubber.

INDIA RUBBER, as it is generally called in text-books and official reports, is a native of Brazil, and grows wild there. Although efforts at cultivation have been successful with the seed in other countries, and even in Brazil have not been altogether overlooked, yet by far the greater part of the rubber exported from the Republic is gathered from the forests of the northern interior of the country just as nature grew them; no systematic preparation of the ground has ever been necessary, and the entire care of the rubber gatherers has been given only to obtaining the juice from the rubber tree and of getting it to market.

This essential factor of modern industrial life was utilized first by the natives of America, and they found some place for it in their domestic economy as a waterproof covering for clothing, boats, and for their kind of bottles. Caucho, or, in the aboriginal, cahuchu, from which comes the corruption caoutchouc, is the earliest word applied to rubber. The Brazilian speaks of borracha, and this refers particularly to the product of the hevea, the rubber tree par excellence. It is indigenous to the region of the River Amazon and in the tributary areas of Peru, Bolivia, Ecuador, Colombia, and Venezuela. Hevea is a large tree, of slow growth and long life. It has been found 12 feet in circumference. It requires low lying, rich, deep soil, and abundant moisture. It grows wild in Brazil, but not in clumps, being found rather scattered through the tropical forest, but it is well adapted to cultivation, and has been planted in the East Indian Islands with success. Manihot produces the Ceara rubber of commerce, but its habitat is a high, stony, and arid country. This also is native to Brazil, but in the region south of the Amazon. Castilloa, next to Hevea, is the best known rubber producer, and while found in Peru and elsewhere south of the equator, its principal range is in Central America and south Mexico. Other trees, shrubs, and vines (lianas) yield rubber, the most interesting, for America at least, being the guayule, which is a shrub containing in its branches a pure rubber that can be used for every purpose to which the latex of hevea is applied. Guayule is a native of Mexico and grows on the elevated plateaus of the northern States of that Republic.

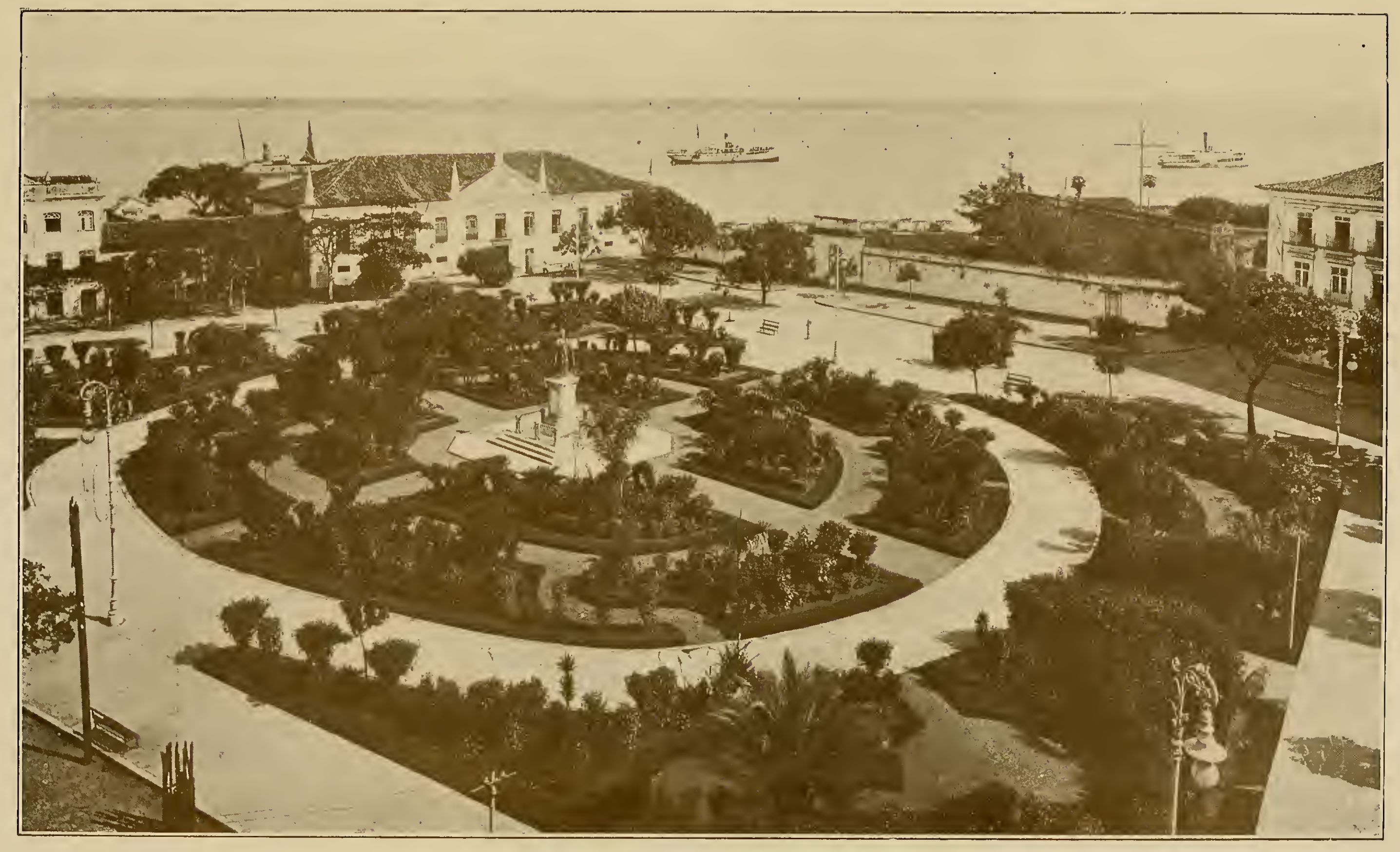
Rubber is the cream from the juice, the milk or latex of all these trees, shrubs, and vines. It is not the sap, as it plays a distinct part from sap in nature's laboratory. Rubber has an exact chemical formula, $C_{10}H_{16}$; it is a whitish solid, opaque, and forms a gelatinous mass with ethers and the coal-tar oils. It will also melt and burn. Mixed with sulphur in proper proportions, it produces the substance with which we are most familiar, the rubber of commerce. This retains the valuable properties of the pure article, at the same time becoming easier to handle in manufacturing.

Gathering rubber is largely a matter of native skill, the tree being tapped, the cream removed and coagulated, and the raw rubber prepared for market; but on modern plantations more scientific methods have been devised, and the product is cleaner and yields a higher proportion of available substance. After the crude rubber reaches the factory it is manipulated into the form required, by admixture of different amounts of sulphur (vulcanized, as the process is called) and by the application of different degrees of heat.

Rubber grows old, but can be reclaimed; that is, the worn-out article can be deprived of its pure rubber contents, which then can be again treated by the original method so as to be almost as good as new. Thus old boots, belting, hose, and similar scraps are devulcanized, and the reclaimed rubber finds its place in the market as a partial source of supply for the constantly increasing demands of industry.

Brazil dominates the india-rubber world, as the quantities from Ceara, Manaos, and Para are about one-half the world's supply, and set the price for the raw material in the consuming markets. The United States, Great Britain, Germany, France, and Belgium are the important buying centers, and they absorb all that the immense Amazon territory, the uplands of Brazil, Bolivia, Peru, and the newer regions of the Far East, Mexico, and Central America can produce.

MANDIOCA is another of the great products of Brazil, dating back to prehistoric times, and is peculiarly associated with the country. It is the food of the natives, as corn (maize) was and is the food of the North and South American Indians outside of the boundary of what is now known as Brazil. The early discoverers noticed that mandioca was cultivated and eaten in this region, and they were told that supernatural instruction had been given the simple natives in the preparation of the mysterious root, for it is a shrub about 4 feet high which has been induced to change its root into a veritable tuber.



FREI CAETANO BRANDÃO SQUARE, BELEM (PARA), BRAZIL.

This beautiful public square was established and named in honor of its founder, Bishop D. Frei Caetano Brandão, a philanthropist, who built the first hospital in Belem (Para) in 1787. The building to the right, fronting the bay, is the "Castello," or old fort, which protected the early city; the two-story building to the left was formerly a war arsenal, but is now used as a hospital. The cathedral, other important edifices, and handsome private residences front on this square.

In its raw state mandioca is an irritant, not infrequently a deadly poison, but properly prepared it becomes a richly nutritive food, esteemed by Brazilians high and low, and forms a staple for bread throughout the country. All Brazil grows the plant, but it is used chiefly along the littoral and on the lower plateaus. From June to September is the best planting season, the root being gathered eight months to two years afterwards, depending upon soil and climate. Great care is necessary to treat the root in such a way that the poisonous starchy contents be changed into healthy, edible starch, and the natives seem to be most expert in their methods of doing this. Gathering the tubers, washing and grating them, expressing the water, and finally roasting what was grated, must all be done on the same day. The resulting meal is the mandioca flour, the staple food of Brazil.

Although difficult of cultivation, mandioca can be cultivated, as is seen to-day in the fields around Rio de Janeiro and other large cities, and the immemorial customs of the natives prove that its present high state of growth has resulted from generations of agricultural watchfulness. Nevertheless the plant is found wild, scattered throughout the virgin forests of the country. It is certainly indigenous to Brazil, and belongs to the genus Jatropha (manihot), related to the cassava of other parts of the world.

IN THE DIAMOND-BEARING REGION OF MINAS GERAES, BRAZIL.

Diamonds were first discovered in this State in 1727. Its output, according to last figures available, amounted to $310,000. The famous diamond "Star of the South," weighing before cutting 254 carats, was found in this State in 1854.

The flour made from the roots is of varying quality, according to the root from which it comes and the skill with which it is prepared. It is consumed within the country by the Brazilians themselves, and offers a beloved competitor to wheat flour imported from the United States or Argentina. What may be called a by-product of mandioca is tapioca, a pure starch common in all well-regulated kitchens, which Brazil exports to the amount of about $200,000 annually.

CORN, COTTON, TOBACCO, and CACAO are increasing in area in Brazil. Rice, once largely imported, is now so extensively grown that the imports of it have fallen to practically nothing. Sugar cane has been cultivated since the earliest European occupation, and Brazilian sugar has played an important place in the world's economy. The pastoral industry of the country has long been firmly established, but in 1910 this has noticeably advanced. In the State of Rio Grande do Sul cattle have been grown and killed for their meat and hides, and considerable amounts exported, and with increasing facilities for such work as well as for shipping the south of Brazil promises to take a still larger share in foreign trade. In the States of Minas Geraes, São Paulo, and Rio de Janeiro the pastoral industry is progressing remarkably, and the dairy products, which a few years ago were unimportant, are now reckoned as of decided value.

As regards industrial establishments[1] a fair estimate places them at 3,400 at the close of 1910. The total number of employees is given as 160,000, the capitalization at about $220,000,000, with a production of $240,000,000. Fully 60 per cent of this capital is invested in factories located in the Federal District, and in the States of Rio de Janeiro, São Paulo, and Rio Grande do Sul. Pernambuco has extensive sugar industries and cotton mills, and smaller manufacturing plants are scattered in various parts of the Republic.

Textile manufacturing accounts for fully 40 per cent of the total production of manufactured articles being from looms, chiefly cotton goods. It is only 20 years ago that the first textile mill was started, but the industry has increased remarkably since then. owing to improved machinery and to increased facility of transportation which brings the cotton fields, the mills, and the consumers much closer together. As the stock in these companies yields a good profit on the investment, there is yet opportunity for future extension of the industry.

In the shoemaking industry there are several large factories in São Paulo and Rio de Janeiro, and of late the tanneries of Rio Grande do Sul have turned out a good quality of leather in many grades, offering competition to the stock imported from abroad.

During 1910 there were opened in the Federal District two factories for the manufacture of chemicals; a pencil and penholder factory; a brick factory; a factory for the manufacture of ready-made clothing, with a cutting establishment and provision for piecework; and a sugar refinery. There has been extension of the flour-milling industry by one large mill in the State of Rio de Janeiro and smaller mills in South Brazil, all using wheat imported from Argentina.

Brazilian breweries are constantly increasing their output, as the demand for beer is growing in all parts of the Republic, and the local brewers have learned to meet this both in quality and quantity.

In most of the large cities furniture, hats, lower grades of clothing, and the necessaries of domestic life are made in factories, and foundries for simple metalwork exist, but as a rule complicated machinery, preserved foods, and the so-called luxuries are still imported, and the market for them is a very broad and secure one.

The lumber industry is advancing since the new railroads have entered the States of Parana and Santa Catharina, where the best pine and soft-wood tracts are located. Several large sawmills have been built in this region, and there is room for more work of this kind. The hardwood region is in the northern, tropical States, and concessions recently granted promise to extend the industry materially in them.

In mining, while no advance was noticeable during 1910, a few interesting features were developed. It was asserted that the State of Minas Geraes possesses immense deposits of iron ore, which are being carefully examined by foreign experts. As the railway is approaching the district where they lie, they may soon be available for consumption in the iron and steel trade. A few gold mines are regularly worked, and many fine diamonds are found by the mining companies there, the production also of manganese, monazite, and other minerals continues adding steadily to the industries of Brazil.

MONAZITE SAND is found chiefly along the coast of the States of Bahia and Espirito Santo, although it is also gathered in the rivers of this region. It is an

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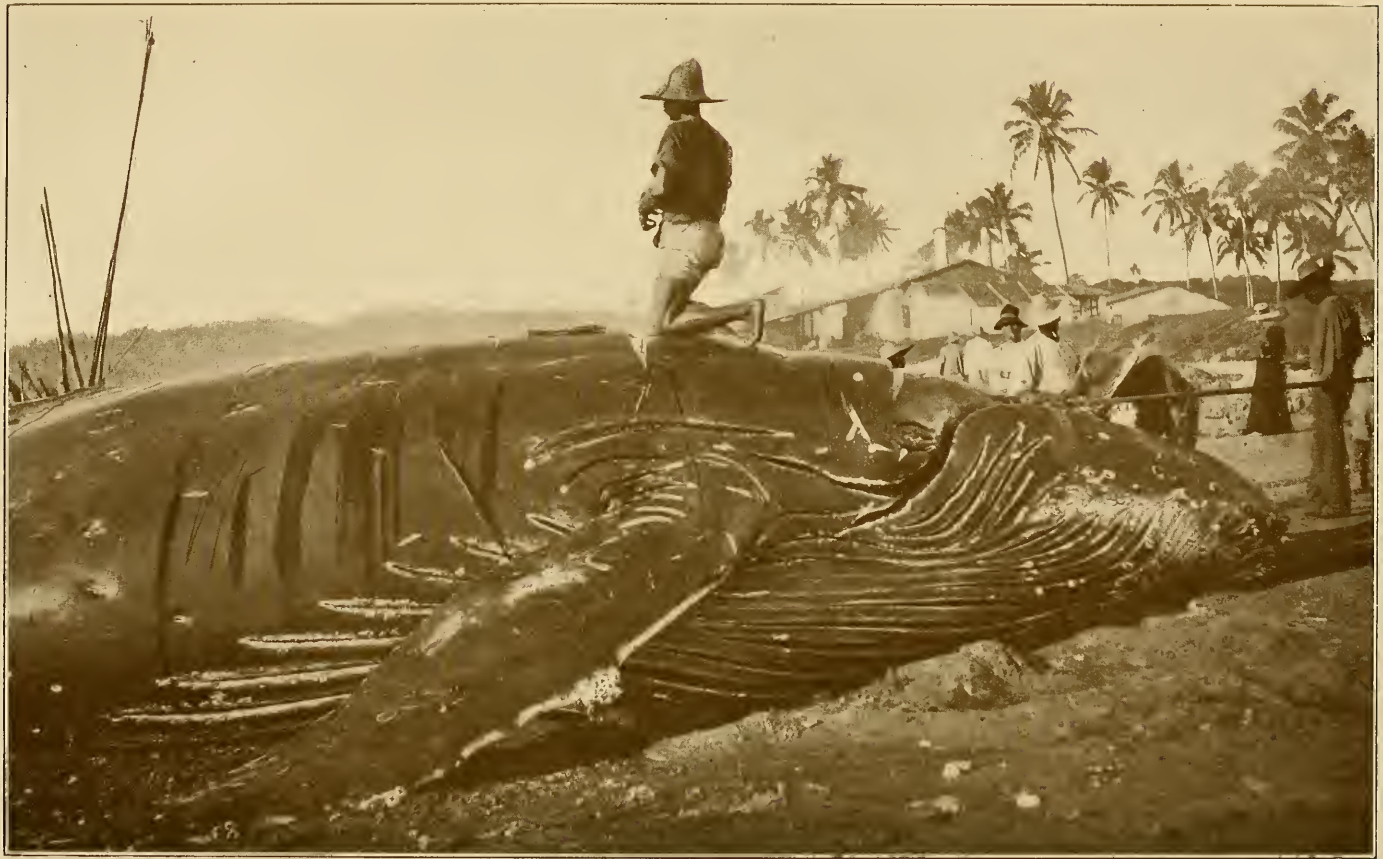
[1] Much of this information is derived from the annual report of Vice Consul General Slechta, Rio de Janeiro.



PREPARING TO CUT UP A WHALE.

Whaling in Brazil is carried on to a considerable extent, the industry being confined to a region extending along the coast of the State of Bahia from Assu da Torre to Caravellas. The whales appear in large numbers during the months of July, August and September ,and the catch in the last few seasons has averaged 300 to 400 whales.

anhydrous phosphate of the rare earth metals, like cerium, the thorium being the metal that gives the sand its great commercial value. After proper preparation the resulting product is used in Welsbach mantles and similar incandescent materials, and recently it has been shown to be of decided advantage in the Nernst lamp. The greater part of the world's supply comes from Brazil, although the Carolinas in the United States have deposits that are commercially worked.

RAILWAYS AND INTERIOR WATERWAYS.

The railways of Brazil were originally established, not with the idea of affording or facilitating internal commerce, but with the great purpose of bringing the products of a contributing interior territory to the nearest seaport and of distributing to this interior the merchandise brought in from abroad. On the Atlantic coast, Recife (Pernambuco) is the focus of one system, São Salvador (Bahia) of another, Rio de Janeiro of a third, São Paulo and Santos (the coffee region) of a fourth, and Rio Grande do Sul, in the extreme south, of a fifth system. In recent years the Government has felt the great need of connecting these various systems by interior railways running north and south, both to afford interior communication independent of the ocean and to stimulate an internal commerce and settlement. This plan has been successful north and south of Recife, so that to-day it is possible to travel by rail between the ports of Natal and Maceio; in like manner Rio de Janeiro has been connected with São Paulo, Porto Alegre, and Rio Grande do Sul, and also with the growing port of Victoria, north of the capital. South of São Paulo construction has been rapidly extending through the States of Parana and Santa Catharina toward the Uruguayan frontier, and during 1910 connection was established between the lines in these States and those of Uruguay, so that by the close of the year it was possible to travel by rail through from Montevideo to Rio de Janeiro, a total length of 1,967 miles.

The total length of railways in operation in the Republic at the close of 1910 was 21,370 kilometers (about 13,279 miles). The total mileage added during the year was 1,870 kilometers (1,162 miles), which is the greatest amount opened to traffic in any one year for a decade.

The principal feature during 1910 was the consolidation of a number of the smaller lines or systems into larger groups. The Brazil Railway Co., formed by a combination of United States and Canadian capital with that of France, has secured control of the lines of the Cie. Auxiliare de Chemins de Fer au Bresil, and also the Sorocabana, São Paulo and Rio Grande, Parana, and Thereza Christina. It also has a very important interest in the Paulista and Mogyana Railways, which cover about 1,600 miles. This system, when completed, will establish a direct means of communication between the States of São Paulo, Parana, Santa Catharina, and Rio Grande do Sul, and join up the railways of Brazil with those of Uruguay, Argentina, and Paraguay. The total length of these lines in operation on April 1, 1911, not including the Paulista and Mogyana, was 3,102 miles, with 233 miles under construction and 1,540 miles to be constructed, so that when all the various roads are completed the system will cover a total extension of 4,875 miles. The Madeira-Mamore Railway in the extreme north, which forms the connecting link for the passage of the vast commerce of the rivers of Bolivia to those of Brazil, is also being operated by this company.

Other large systems are the Great Western of Brazil, with lines in the States of Alagoas, Pernambuco, Parahyba, and Rio Grande do Norte; the Southern Minas Federal Railways, in Minas Geraes, the Federal Railways of Bahia, in that State, with an extension into Sergipe, the Brazil Northeastern, the Leopoldina Railway, the Central of Brazil, and the Goyaz Railway, the greater part of the last-named line having yet to be constructed.

Work is being pushed on the Madeira-Mamore Railway in the extreme western part of Matto Grosso, the line which will connect the Mamore and Madeira Rivers, with a total length of 346 kilometers (214 miles), passing around the falls which have heretofore made a direct commercial route from Bolivia to the Atlantic Ocean an impracticable matter. This railway is being constructed by the Brazilian Government under the treaty of Petropolis, in which Bolivia ceded, for a consideration, all its rights in the Acre territory to Brazil, and the latter, among other considerations, agreed to build the railway. Trains are now running regularly from Porto Velho, the new terminus of the road below Santo Antonio, for a distance of 170 kilometers, and the rails, to July 1, 1911, had been laid for a total of 233 kilometers.

Additions were also made to many of the northern lines which will tend to bring into close communication the States of Ceara, Rio Grande do Norte, Parahyba, Pernambuco, and Alagoas. The Federal Government entered into a new contract with the company controlling the lines in the last-named State, whereby certain extensions of existing lines and new branches are to be constructed, which, when completed, will form a system traversing the greater part of the State and connecting it with Goyaz on the west and Minas Geraes on the south. The Timbo and Propria line, which is to form part of this system, will, when completed, form the connecting link with the State of Sergipe. When a connection is established between this line and Maceio, in Alagoas, and those contemplated in Bahia and Minas Geraes have been completed, all the Atlantic ports from Natal south will have rail connection.

STEAMSHIP "RIO DE JANEIRO" AT PERNAMBUCO, BRAZIL.

The *Rio de Janeiro* is one of the vessels of the Lloyd Brazileiro Steamship Co., a Brazilian company operating 66 steamers under the Brazilian flag.

Good progress is being made on the Goyaz Railway, which is to run from Formiga, in Minas Geraes, up to and beyond the capital of Goyaz. At the close of the year the line had been completed to Bambuhy in that State.

Work has been steadily pushed on the line of the Northwestern of Brazil from Bauru to Corumba on the boundary line between Matto Grosso and Bolivia. At the beginning of 1911 the line was in operation as far as Jupia, a distance of 201 kilometers (125 miles).

When the line now building from Sao Francisco to the Paraguayan frontier is completed through the States of Santa Catharina and Parana, which road is to be continued to Asuncion, it will offer another outlet for the growing commerce of Paraguay, most of which now goes via the river route to Buenos Aires.

By the completion of the sections of line in the north and south of Rio Grande do Sul, the ports of Rio Grande do Sul and Porto Alegre have been put into communication with the Federal capital and a through route established between Montevideo, Uruguay, and Rio de Janeiro. The lines in this State have also reached the Uruguay River, which forms the boundary with Argentina, and by means of car ferries across this river the railroad systems and the capitals of these two Republics will also be united.

Many additions were made to the existing lines in the more populous portion of the country. Some of these served to connect the various systems, but the large majority consisted of extensions to territory hitherto unexploited by railways. A number of new companies have also been formed to build new lines or to connect those already completed.

Surveys are under way for a line to connect the ports of Sao Francisco, Florianopolis, and Porto Alegre, and construction will be commenced as soon as they are completed.

The Federal capital as well as many of the larger cities are served by street railways, many of which are electric lines. The many streams in the Republics are capable of furnishing an enormous power for electrical purposes, and it is proposed to electrify certain portions of the railway lines already in existence.

Brazil has been favored by nature with a most wonderful system of fluvial arteries. It has within its territory not only the largest river basin, both in area and in length, in the world, but has also perhaps more navigable rivers than any other country. The mighty Amazon is navigable almost for its entire length, as are most of its affluents, while in the southern part of Brazil the Paraguay, Uruguay, and Parana Rivers are all navigable.

The Republic has over 10,000 miles of navigable waterways open to river steamers and ocean-going vessels, and 20,000 miles additional which are navigable for light-draft and flat-bottom boats only. Several steamship companies maintain a regular service between points on these rivers, plying on the Amazon, Negro, Purus, Madeira, Pardo, Tapajoz, Para, Jurua, and Javary. Local steamers ply between Para and Obidos, on the Amazon River, and on the Araguara River from the city of Belem (Para) to inland points. The Guama, Tocantins, and Sâo Francisco Rivers also have regular steamer traffic.

The most important of the Brazilian lakes are the Lagoa dos Patos and the Lagoa Merim. This latter lake forms part of the boundary line with Uruguay, and the two make a considerable body of navigable water. The former is an enlargement of the Jacuhy River near its mouth in the Atlantic. It is about 140 miles long and 40 miles broad. At its northern end is the important city of Porto Alegre, and at the southern point is the seaport of Rio Grande do Sul.

THE PRESS OF BRAZIL.

The development of newspapers and of such general periodical literature in Brazil has been subject to the same restrictions, and they have therefore had principally the same local environment, as the railways in the earlier Empire, and thereafter in the Republic. In many countries the common and indeed the most available center of national and industrial life has been the capital, toward which most things flow, and from which most ideas emanate. In Brazil this has not been so, owing partly to geographical obstacles, and partly, too, to historical initiative.

In the beginnings of colonial settlement Brazil was composed of several isolated foci extending along the coast, and each interesting itself almost altogether in the affairs closely surrounding it. Thus their press was at first local; any newspaper represented its own section or State, and generalized its news of the remainder of the country along with that from abroad. In other words, the press could be national only so far as the nation was associated in the minds of its readers with the particular State in which they lived.

The fact is of more than passing interest, therefore, that the first newspaper published in Brazil appeared in its royal capital of Rio de Janeiro, which had been but very recently occupied by the court of Portugal; that is, on March 7, 1808. The Gazeta do Rio de Janeiro issued its first number on September 10, 1808, and its opening page contained, below a Latin quotation from Horace, a long dispatch from London, of the 12th of June, with what was at that time the latest news from Europe. The Gazeta was not the official organ of the Government, in spite of the fact that it contained the royal stamp, for the Government assumed responsibility only for what it ordered printed under its own signature. This newspaper continued through 1822, but on January 2, 1823, it took the name of Diario do Governo. The first number stated that the paper would appear weekly, but it changed at once to a semiweekly, and ended by coming out three times a week. This was altogether a newspaper, and offered no political opinions, nor did it pretend to exert influence over commercial affairs of the nation. In reality, the liberty of the press did not exist. Any publication must first be submitted to a kind of censor, an accepted product of the times, and matters relating to religion, politics, or legislation were very apt to be erased. This applied to books, whether imported or proposed to be printed in Brazil, and was only removed as Brazil became eager for literary and intellectual freedom.

Other papers appeared and disappeared in Rio de Janeiro, until the foundation, on October 1, 1827, of the Jornal do Commercio, the dean of the press of the Capital. The Jornal do Brazil, O Paiz, Correio da Manhã, Gazeta de Noticias, Diario do Commercio, Folha do Dia, A Imprensa, Diario do Noticias, of the morning papers and A Noticia, A Tribuna, O Secuol, Correio do Noite, in the afternoon papers, among other well known dailies may be noted. In Rio de Janeiro are published about 100 periodicals. Many are weeklies; the Brazilian Review or L'Etoile du Sud are for the English or French residents, while Italians, Syrians, and other colonies have their special papers. Others appear less frequently, and there are not a few annuals.

One of the first humorous papers to be published in Brazil had its first number dated in December, 1860, and its purpose is explained by its name, A Semana Illustrada (The Illustrated Weekly). This lasted for 16 years, and has been succeeded by many others of the same kind, for the Brazilians are fond of humor, and appreciate wit, whether it comes from themselves or from European or other American sources.

The size of the first paper was 19 by 13½ inches, and most of those of the same epoch were only a trifle larger or smaller. Even as late as 1870 this seemingly popular size was quite common, especially in towns and cities where paper of the easiest obtainable form had to be accepted from the source of supply, and to-day only in the best-known and most widely circulated metropolitan sheets are the sizes usually seen in New York or London fixed as the standard for the newspapers cried on the street by the active Brazilian paper boys.

In Bahia, on May 14, 1811, appeared the second newspaper, in point of date, in Brazil, the Idade d'Ouro do Brazil, representing the area of which that ancient capital was the center. The Aurora Pernambucana, the first paper for Pernambuco and that region, appeared on March 27, 1821. In Maranhao, O Conciliador was published on November 10, 1821. In Para, O Paraense had its first number dated March, 1822. The Compilador Mineiro, dated October 13, 1823, was located in Ouro Preto, the capital of the State of Minas Geraes. For São Paulo, the energetic and progressive region covered by this name, which implies both the State and its capital, O Farol Paulistano was the first newspaper, and began on February 7, 1827. The best authenticated if not the first paper in the State of Rio Grande do Sul appeared in Porto Alegre, the capital, in 1828. Thus, at about this time every State, including such as had a seaboard as well as those like Goyaz, with only a vast interior territory, began to be represented by its periodic press, while simultaneously political and intellectual items occupied much space and more fully interested the people than the mere tabulation of facts and events as they happened.

Brazilians are great readers. If this were not so it would be impossible for the practically innumerable host of newspapers which are to-day published from one end of the Republic to the other to exist. But it is a noteworthy fact that each town of any commercial importance has its paper, every city of prominence, whether due to its trade or to its political position, has two or more, and frequently, in those cases where a colony from a European country has maintained a successful existence for a generation, there will be found a good daily, or more usually a weekly paper, published in the common language of the people. This desire for the news seems to have developed rapidly after 1830, when papers began to be published in all parts of Brazil, so that by 1851, even the people of the Province of Amazonas had their local organ in the settlement of Barra do Rio Negro, which has become the splendid capital of the State of Amazonas.

THE FALLS OF PAULO AFFONSO ON THE SÃO FRANCISCO RIVER.

This waterfall has frequently been referred to as the "King of Rapids." The Federal Government has recently granted a concession to a Brazilian company for the utilization of the falls for generating electric power.

One effect of the old custom, still influenced of course by the natural geographic conditions of the country, is that the local paper is the great exponent of the ideas, the ambitions, and the feelings of the people in its neighborhood. The dependence upon the news or opinions of the sheets from Rio de Janeiro is practically impossible, because the day's issue of any paper from there can not reach all parts of the Republic until weeks have passed, and may not be delivered at any one point until the time for action on any one question has gone by. In fact, some seaports receive papers from Europe almost as soon as those from Rio. Telegraphically news is now spread throughout Brazil as quickly as elsewhere, but the local paper rules supreme within its chosen area.

This state of things must be borne in mind by one purposing to read or to make use of the newspapers. They are virile, independent, well edited, and newsy; their leading articles or editorials are remarkably forceful, and their array of facts and semiofficial data is frequently the best source of information available; and they circulate each in its own field.

For this reason the student or business advertiser must consider, more so than in most countries, the locality in which his interests lie. For the upper Amazon a paper in Manaos should be selected; for the lower river, one in Para. Recife (Pernambuco), São Salvador (Bahia), Rio de Janeiro, São Paulo, Porto Alegre, Rio Grande do Sul, can not be successfully reached except through a newspaper published on the spot. The local paper is a necessity, but the irregularly delivered metropolitan paper is a luxury.

In examining one of the best-known dailies, its modern dress is very striking. It has usually 8 to 18 pages, its size is about 20½ inches by 26½ inches, with 8 columns to the page. In smaller cities the dailies are proportionately smaller, as would be expected. The first page has a résumé of the issue, with extensive telegrams from abroad and principal places of the Republic; inside are detailed reports on local matters, transcripts from stenographic notes of congressional or municipal meetings, editorials, market quotations, theatrical and sport criticisms, and general news. The last 6 or 8 pages have advertisements of all kinds, with detailed shipping news and lists of arrival and departure, for Brazil depends still upon the sea for its commercial and social movements.

The papers appearing less frequently than every day are of about the same pattern, and special publications, trade, literary, and artistic journals are not unlike those recognized types in other parts of the world. Illustrations are not so common in Brazilian papers as in those of the United States, but many of the comic variety are full of caricature sketches, while the weeklies display photographs and engravings more frequently than formerly.

During the century passed since the first periodical publication was issued in Brazil upward of 25,000 papers have been born, an average of about 250 a year. What proportion of these remain in existence is impossible to determine, as no accurate estimate is at hand. Perhaps this ignorance may be cleared away by some friend in Brazil who has access to an authority on the subject.

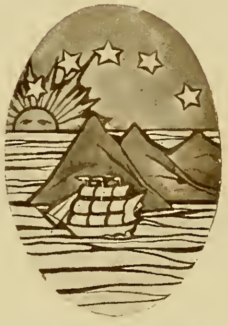
Reference must be made to the Porto Velho Marconigram, a weekly publication, in English, which is edited by employees of the Madeira-Mamoré Railway, clear in the center of Brazil. It deserves to live many years beyond its present fifth volume.

Two practical items deserve notice. The circulation varies greatly, of course. Some small papers are restricted to an issue of no more than 500 copies; others average from 5,000 to 10,000, whereas the large dailies of Rio de Janeiro distribute regularly 100,000 copies, and on special occasions may go higher. Advertising rates depend naturally upon circulation. Some papers charge a few cents a line each insertion; others have greater prices, with reductions for repeated insertions or according to the page occupied. Most papers base the rate upon the column inch, or centimeter, which ranges from about 16 cents (gold) of that smaller space unit each insertion to $1.68 (gold) per column inch. The Pan American Union has collected a list of active newspapers in Brazil, with their circulation and advertising rates whenever obtainable, and will be pleased to place this at the disposal of anyone to whom it may be of benefit, or to give the United States address of correspondents and agents authorized to act for certain papers in Brazil.

COSTA RICA

The Republic of Costa Rica has an area of 23,000 square miles and a population of about 370,000, or 16 per square mile. The mountain range, which extends the length of the country, influences the climate to a great extent, the plateaus being quite cold at certain seasons of the year. Tobacco, cacao, sugar, indigo, rice, cocoanuts, bananas, and coffee are successfully grown, the last two being the principal articles of export. The main products of the mine are gold and silver, although deposits of nickel, iron, and manganese are widely distributed. Rubber is gathered in the forests, and ironwood, cedar, mahogany, and other cabinet woods, as well as logwood and other trees used for dyeing and tanning, are found in abundance.

The present constitution of the Republic was adopted December 7, 1871, some slight amendments having since been added. The Government is divided into legislative, executive, and judicial branches. The legislative power is exercised by one single body called the Constitutional Congress and composed of 43 deputies. It meets in the capital, San Jose, on May 1 and continues for 60 days, which period may be continued for 90 days if the Chamber so decides. The President can also convene it in extraordinary session. The deputies are elected by indirect vote of electors chosen by the people at the rate of one deputy for every 8,000 inhabitants or fraction exceeding 4,000. A number of substitutes are elected at the same time. Suffrage, with some property or educational qualifications, is possessed by natives and naturalized citizens over 20 years of age. A standing committee of five deputies represents Congress during its recess and advises the President in all matters which would ordinarily come before the Chamber.



COAT OF ARMS OF COSTA RICA.

The President is elected in the same manner as the deputies, i. e., by an electoral college chosen by popular vote. His term of office is four years, with an annual salary of 15,840 colones (about $7,365), and he may not be reelected for a second consecutive term. There is no vice president, but three designados, known as first, second, and third, are named by Congress to exercise the executive power in case of the death, absence from the country, resignation, or incapacity of the President.

The President and his Cabinet, the latter composed of five secretaries, who are appointed by and responsible to the President, are as follows:

President: Sr. Lic. Ricardo Jiménez (inaugurated May 8, 1910).

Secretary of Foreign Affairs: Sr. Manuel Castro Quesada.

Secretary of Interior and Judicial Police: Sr. Carlos María Jiménez Ortiz.

Secretary of Public Instruction: Sr. Nicolás Oreamuno, who is also Secretary of War and Navy.

Secretary of Finance and Commerce: Sr. Felipe J. Alvarado.

Secretary of Fomento (Promotion): Sr. Enrique Jiménez Nuñez (Assistant Secretary).

The Department of Foreign Affairs (Secretaria de Relaciones Exteriores) through the diplomatic and consular corps maintains cordial and advantageous relations with foreign countries and has charge of all matters usually pertaining to that department. It also has charge of all matters pertaining to the administering of justice, the granting of pardons, the affairs of the Roman Catholic Church, and the distribution of charity.

PRESIDENT RICARDO JIMENEZ.

The Department of Interior and Police (Secretaria de Gobierno y Policía) has charge of the interior administration of the Provinces and Comarcas, through the governors and canton chiefs, and also exercises a general supervision over the municipal councils. The post offices and telegraphs, the recorder of deeds, the civil register, the national archives, the city police forces, as well as rural police, the police courts and national prison, are under this department, as are also the officials charged with the maintenance of the public health.

The Departments of Public Instruction and War and Navy (Secretaria de Instrucción Pública, y Guerra y Marina) are in charge of one cabinet official. All the public elementary schools and the high and technical schools, such as the Lyceum at San Jose, the Lyceum at Heredia, the Superior College for Girls, the School for Medicine and Surgery, the Lawyers' College, and the Faculty of Medicine, Surgery and Pharmacy, are under the jurisdiction of the first-named department as are also the Institute for Physical Geography, the Meteorological Observatory, the National School of Fine Arts, and the national and other public libraries. Matters pertaining to the maintenance, instruction, and equipment of the army and navy are within the scope of the second-named department.

AN IMPORTANT COMMERCIAL STREET IN SAN JOSE, THE CAPITAL OF COSTA RICA.

The Department of Finance and of Commerce (Secretaria de Hacienda y Comercio) has charge of the administration of the national finances and the regulation of commerce, all customhouses and internal-revenue offices, etc., being under it, as are the National Commercial Laboratory, where all foodstuffs, chemicals, beverages, etc., are analyzed. It also controls the national liquor factory, which manufactures liquors and prepares alcohol for various purposes. This factory also elaborates and sells tobacco and cigars.

The Department of Fomento (Secretaria de Fomento) exercises jurisdiction over the railways, constructs and keeps in repair all bridges and roads, as well as public buildings.

The judicial powers are vested in a national supreme court, two courts of appeal, and minor courts. The five justices of the supreme court are chosen by Congress, while other justices are appointed by the supreme court.

The maximum standing army in time of peace is 1,000 men. The war strength is estimated at 40,000. The land forces are supplemented by a motor launch on the Atlantic side and a tugboat on the Pacific side.

There are now in the country 199 post-offices, and 109 telegraph offices with a total length of lines amounting to 2,370 kilometers.

The Republic is divided politically into five Provinces and two Comarcas (Territories), which are again divided into cantons and these into districts and municipalities. The Provinces and Comarcas are administered by governors appointed by the President. The canton and district chiefs are appointed upon recommendation of the governors, and are assisted by municipal councils elected by popular vote.

COSTA RICA IN 1910.

One of the most disastrous earthquakes in the history of the country nearly destroyed the old city of Cartago on the 4th of May. In addition to the great loss of life caused by it, and the irreparable damage to many of the historical buildings, this earthquake ruined the recently finished Central American Court of Justice, which was to have been dedicated and opened in June. With characteristic energy and courage, the Government and the people rallied from their misfortune, and immediately began to restore Cartago in a modern and more resistant way. It is pleasant to record also that Mr. Andrew Carnegie, through whose interest in that international institution and generosity in its behalf the ruined structure was built, signified immediately his wish to replace it by another.

This national disaster caused a disturbance in the routine work of the Government, and much of the activity of the country was given to effacing as completely as possible the results of the earthquake, and to restoring what had been destroyed. That much has already

A RAILROAD IN THE INTERIOR OF COSTA RICA.

There are in actual operation throughout the Republic 427 miles of railway, of which 69 miles belong to the Government, 141 to the Northern Railway Co., and 217 to the Costa Rica Railway.

been accomplished within the short space of six months is a matter of great credit to the Republic.

Excessive charges upon the treasury, both for the expenses of repair and succor after the earthquake and for the financial completion of the contract of the Pacific Railway, modified the original estimates; but in spite of the extraordinary demands the annual revenues and disbursements balanced. Toward the end of the year the debt of the Republic was readjusted on a new basis, and 1911 begins therefore with a satisfactory financial outlook in both national and international relations.

The Pacific Railway has been an ambitious undertaking of the people of Costa Rica, and the rejoicing was great when it was actually concluded, as far as continuity of rails was concerned, on October 21, when connection was established all the way from San Jose to Puntarenas. It is a Government-built and a Government-managed railway, and in conjunction with the older system from San Jose to Limon on the Atlantic side offers now an interoceanic railway which is sure to have commercial and tourist value.

On May 8, 1910, the recently elected President of the Republic was inaugurated. In reviewing his first year of office he calls attention to the fact that the country has remained on peaceful and cordial terms with foreign Governments, and he expressly uses the opportunity to thank the world, in behalf of the Republic, for the many tokens of sincere friendship manifested by individuals and States alike, extended during the national affliction.

Costa Rica has sent delegates to international congresses, among them the Pan American Conference in Buenos Aires, and the Central American Conference in San Salvador, and special representatives participated for the Government in the centennial celebrations in Mexico, Argentina, and Chile.

During the year the boundary question between Costa Rica and Panama was finally argued, the ratifications of the conventions submitting the matter to the arbitral decision of the Chief Justice of the United States had taken place, and his opinion is to be expected before the end of 1911.

In the school system progress continues; there are approximately 32,000 children in attendance at the primary and secondary institutions and over 1,000 teachers—a greater number of teachers in the Republic than soldiers.

Interior affairs of the Republic were harmonious and, with the exception of the one great disaster, nothing marred the quiet progress of the country. The exports of the year exceeded by a favorable figure those of the year before, while the imports were only a small sum short of those of the greatest in the history of the Republic. In educational matters the Government maintained the high standard characteristic of the country, and continues to expend a noticeable proportion of the income, as fixed in the budget, upon that branch coming under the head of public instruction. This, together with the improvement of public roads, are the permanent policy in national progress.

FINANCE.

According to the report made on March 10, by Sr. Manuel Aragón, Chief of the Division of Statistics, annexed to the report of Sr. Felipe J. Alvarado, Secretary of State for Treasury and Commerce, made to the Chamber of Deputies on April 16, 1911, the treasury receipts and expenditures for the year 1910 exactly balanced, and were as follows:

Receipts.	Colones.	Expenditures.	Colones.
National taxes	8,121,735.99	Department disbursements	8,858,572.48
Administrative funds	283,868.33	Administrative payments	244,803.03
Credit operations	2,535,821.17	Credit operations	1,349,735.91
Land sales	66,308.40	Property bought and improved	14,352.87
From other sources	464,233.49	Sundry payments	1,004,503.09
Total	11,471,967.38	Total	11,471,967.38

Estimating the colon at 48 cents United States gold, the receipts and expenditures were balanced at $5,506,544.34.

The national taxes for 1910, which showed an increase of $362,990.19 over the preceding year, were derived from the following sources:

	Colones.		Colones.
Customs	4,858,009.79	Public registry	36,923.20
Consular taxes	127,027.43	Civil registry	805.25
Export duty on bananas	194,273.64	Bills of health	1,825.00
Liquors	1,931,643.13	Fines	1,171.50
Stamped paper	65,086.88	Posts and telegraphs	287,257.65
Stamp taxes	65,031.64	Miscellaneous	83,649.43
Pacific Railway	451,086.59		
Government Printing Office	12,079.83	Total	8,121,735.99
Rent from public lands	5,865.03		

In United States gold the national taxes amounted to $3,898,433.27.

The departmental expenditures were as follows:

	Colones.		Colones.
Legislature	171,216.09	Department of War and Police	1,243,836.78
Department of Government	1,028,152.26	Department of Treasury	2,561,844.32
Department of Fomento	1,968,588.20	Department of Marine	37,042.48
Department of Foreign Relations	264,663.00		
Department of Justice	355,616.85		8,858,572.48
Department of Public Worship	30,996.25		
Department of Charities	92,435.94	Equivalent in United States gold	$4,252,114.79
Department of Education	1,104,180.31		

The principal items of expenditure by the Department of Fomento were on account of railway maintenance and construction amounting to 1,614,177.73 colones.
railway, 1,023,591.54 colones.

In the Department of Justice there was expended for the maintenance of the Supreme Court 88,127.72 colones; other courts, 118,088.11 colones, and mayoralties, 97,288.24 colones.

In the Department of Charities nearly the whole expenditure was on account of hospitals and asylums.

Under the Department of Education the principal item of expenditure was for the primary schools, 724,145.24 colones.

The principal items of expenditure in the Treasury Department were interest and discounts, 1,005,962.69 colones, and collection of revenue on liquors, 729,208 colones.

DEBT.

On December 31, 1910, the public debt of Costa Rica, according to the report of Sr. Felipe J. Alvarado, was as follows:

		Colones.
Foreign debt (£1,617,200)		16,899,740.00
Interior:		
Pacific Railroad bonds	2,635,900.00	
Educational loan	63,400.00	
Internal debt	950,000.00	
Accounts outstanding	719,022.45	
Consolidated obligations	2,864,481.40	
Due to banks, etc	3,818,800.32	
		11,051,604.17
Total		27,951,344.17

The foreign debt is represented by gold refunding bonds for £1,617,200, equivalent in colones to the sum expressed in the foregoing table, bearing 4 per cent interest for 10 years and 5 per cent from January 1, 1921. These bonds were issued pursuant to a contract made on December 7, 1910, by the Government of Costa Rica and the bondholders, represented by Minor Cooper Keith, and called the Fernandez-Keith agreement. This contract was approved at a general meeting of the bondholders on January 11, and by the National Congress of Costa Rica on February 23, and signed by the President on March 1, 1911. The obligations recognized by the Republic in the agreement as outstanding included the consolidated external debt of 1885, unpaid interest due on the same, and the Port Limon 6 per cent sanitary bonds. The consolidated debt was represented in A bonds, 3 per cent, £525,000; B bonds, 2½ per cent, £1,475,000; certificates representing unpaid coupons, £80,000; interest to December 31, 1910, unfunded, £513,093; and Limon sanitary bonds, 1,013,000 colones. The amount of refunding bonds to be issued in exchange for the obligations, as provided in the Fernandez-Keith agreement, is £1,621,600 ($7,880,976 United States currency), of which sum the amount of bonds as above set out in the report of the secretary of the treasury have been issued.

FOREIGN COMMERCE.

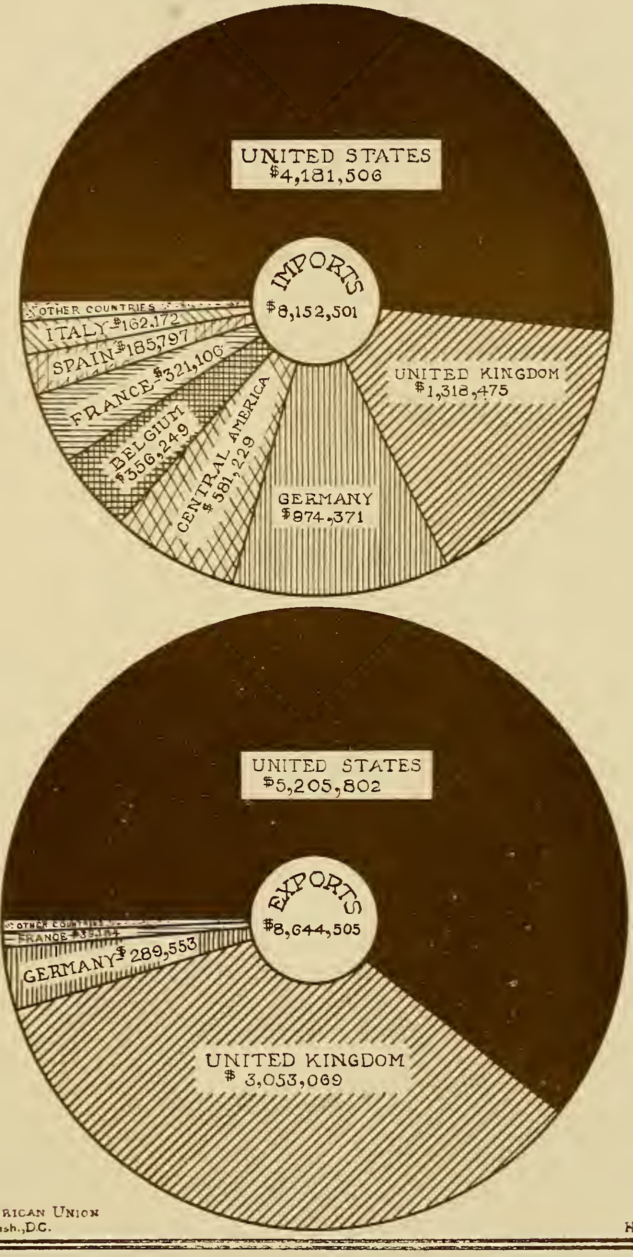
The foreign commerce of Costa Rica, compiled from the report of Sr. Manuel Aragón, Chief of the Division of Commercial Statistics, attached to the report of Sr. Felipe J. Alvarado, Secretary of State for Treasury and Commerce, presented to the Chamber of Deputies on April 16, 1911, for the year 1910, amounted to 34,993,762.91 colones, of which 16,984,377.91 colones were imports and 18,009,385 colones exports. The figures for the year 1909 were 13,139,653.21 colones imports and 17,583,348 colones exports, or a total of 30,723,001.21 colones. There was, therefore, an increase for the year 1910, as compared with 1909, of 3,844,724.70 colones in imports and 426,037 colones in exports, or a total increase in the foreign trade of 1910 of 4,270,761.70 colones. The balance of trade in favor of the Republic was 1,025,007.09 colones.

Expressed in terms of United States currency the value of the foreign trade of Costa Rica for the year 1910 was $16,797,006.20, of which $8,152,501.40 was imports and $8,644,504.80 exports. The gain for the year in imports was $1,845,467.86 and in exports $204,497.76, or a total gain for 1910 of $2,049,965.62.

◦ COSTA RICA ◦

— COMMERCE — 1910 —

$16,797,006



Pan American Union
Wash., D.C.

H.M.Rivero

IMPORTS.

The imports by principal countries for the two years were as follows:

	1909	1910
United States	$3,242,657.11	$4,181,505.70
United Kingdom	1,082,319.45	1,318,473.82
Germany	842,775.31	974,371.42
Central America	269,816.66	581,229.62
Belgium	92,903.52	356,249.64
France	370,799.79	321,106.08
Spain	150,516.97	185,796.54
Italy	163,779.27	162,171.40
Other countries	91,465.46	71,597.17
Total	6,307,033.54	8,152,501.39

Of the countries shown in the foregoing table there were increases in the trade for all except France and Italy. The increase of trade was from—

United States	$938,848.59, or	28.9 per cent.
United Kingdom	236,154.37, or	21.8 per cent.
Germany	131,596.11, or	15.6 per cent.
Central America	311,412.96, or	115.4 per cent.
Belgium	263,346.12, or	283.4 per cent.
Spain	35,279.57, or	23.4 per cent.

The decrease in trade from France was $49,693.71, or 13.4 per cent; from Italy, $1,607.87, or nearly 1 per cent.

The following table shows the principal items of importation for the years 1909 and 1910, with the increase or decrease for same:

Articles.	1909	1910	Gain or los
Rice	$146,745.94	$134,132.18	—$12,613.76
Coal	13,747.68	152,759.04	+139,011.36
Beer	68,191.23	66,689.01	— 1,502.22
Dressed leather	88,423.49	89,067.86	+ 644.37
Canned and preserved foods	47,625.13	76,757.85	+ 29,132.72
Structural iron	239,932.56	299,773.77	+ 59,841.21
Wheat flour	478,526.71	350,808.75	+127,717.96
Lumber	121,834.82	157,989.70	+ 36,154.88
Lard	162,314.34	224,483.32	+ 62,168.98
Furniture	33,891.14	50,705.39	+ 16,814.25
Material:			
Building	12,937.63	70,960.13	+ 58,022.50
Electrical	108,165.06	112,203.66	+ 4,038.60
Railway	122,989.19	254,294.56	+131,305.37
Tramway	15,267.00	82,871.22	+ 67,604.22
Other industries	26,867.76	35,305.89	+ 8,438.13
Machinery:			
Coffee	16,931.64	23,163.02	+ 6,231.38
Other industries	51,402.15	36,834.18	— 14,567.97
Pharmaceutical products	123,155.09	131,733.57	+ 8,578.48
Tobacco	132,522.75	143,002.21	+ 10,479.46
Cotton fabrics	715,892.97	849,943.74	+134,050.77
Woolen fabrics	92,273.89	79,899.51	— 12,374.38
Silk fabrics	34,090.19	60,196.82	+ 26,106.63

The importation of live animals for the year 1910 amounted to $481,894.16. Of this amount, $445,097.06 represented live stock brought across the frontier from Nicaragua, about nine-tenths of which were beef cattle. The live animal importation from the United States amounted to $4,909.22, and from the United Kingdom $21,913.20.

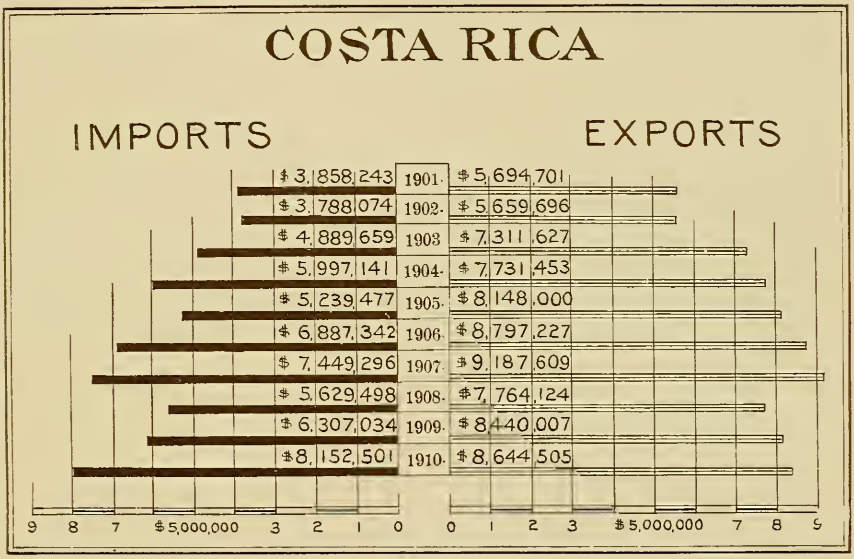
The total weight of the importations through the customhouses for the year 1910, not including frontier imports from neighboring republics, was 118,064 metric tons, an increase over the preceding year of 65,301 tons.

EXPORTS.

The exportation for the years 1909–10 by principal countries was as follows:

	1909	1910
United States	$4,957,165.44	$5,205,802.56
United Kingdom	3,039,928.80	3,053,069.28
Germany	172,063.20	289,553.28
France	121,081.44	39,183.84
Other countries	149,768.16	56,895.84
Total	8,440,007.04	8,644,504.80

The percentage of Costa Rican exports taken by the United States for the year 1910 was 60.22 per cent; for the preceding year this percentage was 58.73 per cent. The percentages of the other countries were as follows: United Kingdom, 1910, 35.32 per cent; 1909, 36.02 per cent; Germany, 1910, 3.35 per cent; 1909, 2.04 per cent; and France, 1910, 0.45 per cent; 1909, 1.43 per cent.



PAN-AMERICAN UNION

There were increases in the export trade of all the countries except France. The increase for the United States was $248,637.12, or 5 per cent; United Kingdom, $3,140.48, or 0.1 of 1 per cent; Germany, $117,490.08, or 68 per cent. The decrease in exports to France was $81,897.60, or 67.6 per cent.

The value of the exports of coffee for the year 1909 amounted to $2,725,030.08, and for the year 1910 to $2,839,766.88, an increase of $114,736.80. The quantity of coffee exported in 1909 was 200,502 bags of 60 kilos (132 pounds) each, and in 1910, 239,948 bags. The exports of coffee in 1910 to Germany were 702 bags of cleaned coffee, and 10,649 bags of coffee in the parchment; to the United States, 20,558 bags cleaned, and 743 bags in the parchment; to France, 3,271 bags cleaned; and to the United Kingdom, 69,751 bags cleaned, and 127,680 bags in the parchment.

The exportation of bananas for the year 1909 was 9,365,690 bunches, and for the year 1910, 9,097,285 bunches, a decrease of 268,405 bunches. For the year 1910, 8,000,249 bunches were exported to the United States and 1,097,036 to the United Kingdom.

The exportation of gold and silver in bars for the year 1909 amounted to $818,422.08, and for the year 1910 to $837,353.76, an increase of $18,931.68.

The value of the woods exported for the year 1910 was $81,157.92, an increase of about 140 per cent on the exports of the preceding year. The principal woods exported were cedar, 3,923 metric tons; mahogany, 101 metric tons; cocobolo, 1,210 tons, and fustic (palo de mora), 417 tons.

The exportation of hides and skins for 1910 amounted in value to $129,129.12; rubber, $105,579.36; cacao, $42,506.88; tortoise shell, $8,885.76; mother-of-pearl, $22,501.44; mineral concentrates, $50,227.20, and sugar, $9,753.60.

A BANANA PLANTATION IN COSTA RICA.

Costa Rica holds first place in the cultivation of this fruit, sending out from her fertile fields one-half of the world's supply. For the year 1910 there were exported from Costa Rica over 9,000,000 bunches of bananas.

PRODUCTS AND INDUSTRIES.

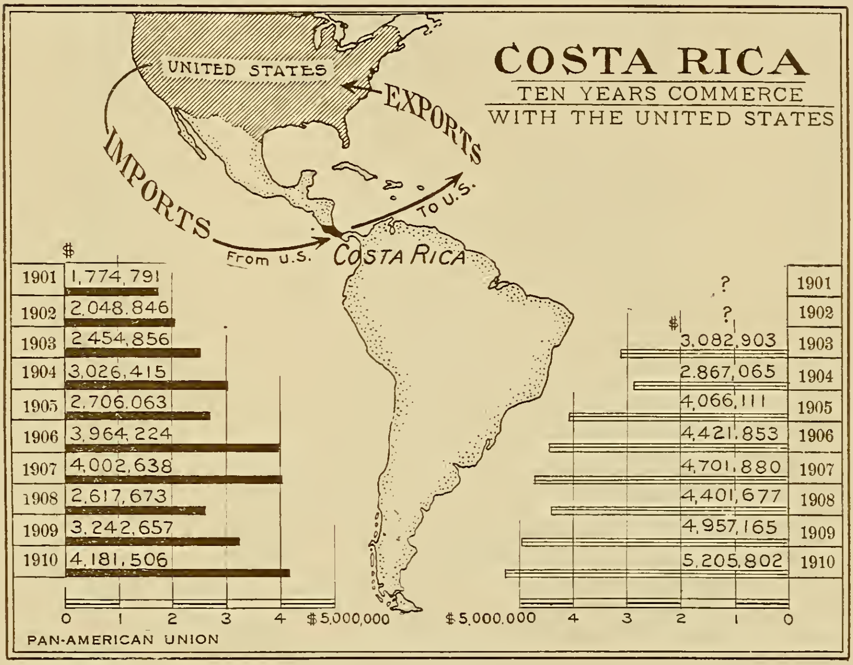
The two chief products of Costa Rica are bananas and coffee. The coffee has been famous for years in Europe, where, especially in England, it always obtains a good price for its exceptional quality and flavor. The cultivation of bananas is perhaps the greatest single industry in the Republic, for the climate and soil are remarkably suited for the plant, and the proximity to consuming markets makes the business profitable.

BANANAS.—Forty years ago the banana was not as well known in the United States as the alligator pear is to-day. Within the memory of two generations the imports of this fruit have grown from nil to 40,000,000 bunches. Three billion bananas, retailing for $35,000,000. That is the banana budget of the United States for 1910. The fruit has made this remarkable advance in public favor "strictly on its merits," to use a commercial colloquialism. Capt. Baker, of Cape Cod, brought a few bunches of bananas from Jamaica to New York in 1870, and although this was not the first time the fruit had found its way to the United States shores, still he became the father of the banana business, for the importation proved an instant commercial success. The fruit was a high-priced novelty in the market where a brisk demand furnished the inspiration for the great banana industry of to-day.

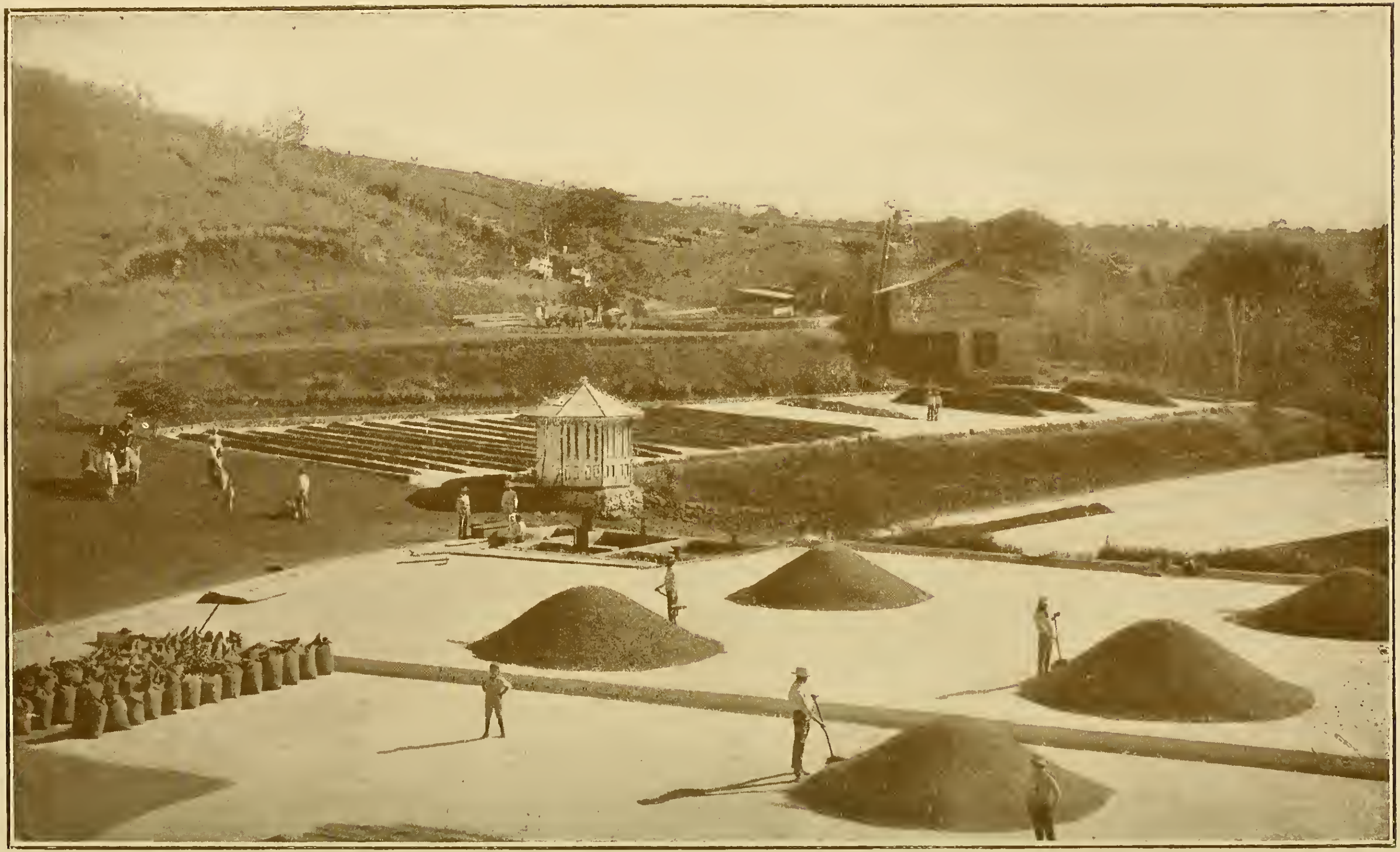
Costa Rica holds first place in the cultivation of this fruit, that profluent Republic sending out from her fertile valleys one-half of the world's supply of *musa sapientium.*

Such is the scientific name and it means "of the wise muse," a reference to the statement of Theophrastus that the ancient sages reposed in the shade of the banana tree and refreshed themselves with the fruit thereof.

The tree grows to a height of from 15 to 40 feet, the curious trunk formed of compact sheathing leaf stalks, resembling corn in some degree, but being about 8 inches in diameter and much more firm in structure. It is "endogenous," which in botany means "increasing by internal growth and elongation at the summit." This quality of increasing by internal growth partly explains the magic development of the newly cut banana stalk, which will be observed to shoot up some inches in a few minutes, while leaves will unfold from the center of the trunk within 36 hours. The legitimate growth of the plant varies from seven months to two and a half years before it fructifies.



The bunch of bananas, a common sight in every fruit store, develops from a large, heart-shaped, scaly bud, which becomes pendant; the scales separate and disclose groups of upward-pointing flowers, sometimes to the number of 150. These are the banana blossoms which turn into the fruit that grows with the detached end up, just contrary to the way it is the custom to hang the bunches after they are cut. One bunch to a tree is the rule, and they vary in length from 2 to 3 feet and in weight from 50 to 80 pounds, which latter, however, is exceptional. The commercial classification is by "hands," a hand being a cluster of the fruit which, with the exercise of imagination, may be said to resemble that useful anatomical member. Bunches growing nine hands or over command the higher prices and are called "firsts" by the trade. "Seconds" are bunches that vary from seven to nine hands and bring a consequently lower price. All bunches having less than seven hands are unfit for shipment, and these are the element of loss in banana cultivation. The bunches are cut while green (the greatest care being needed in the operation) and allowed to continue



DRYING COFFEE IN COSTA RICA.

The coffee industry is, next to banana raising, the greatest source of the national wealth of Costa Rica. The product is especially noted for its quality and flavor. The value of the coffee exported during 1910 was over $2,800,000.

toward the ripening stage during the voyage to their ultimate destination. Care and experience is necessary in handling bananas during shipment so as to insure the lowest possible amount of loss from deterioration.

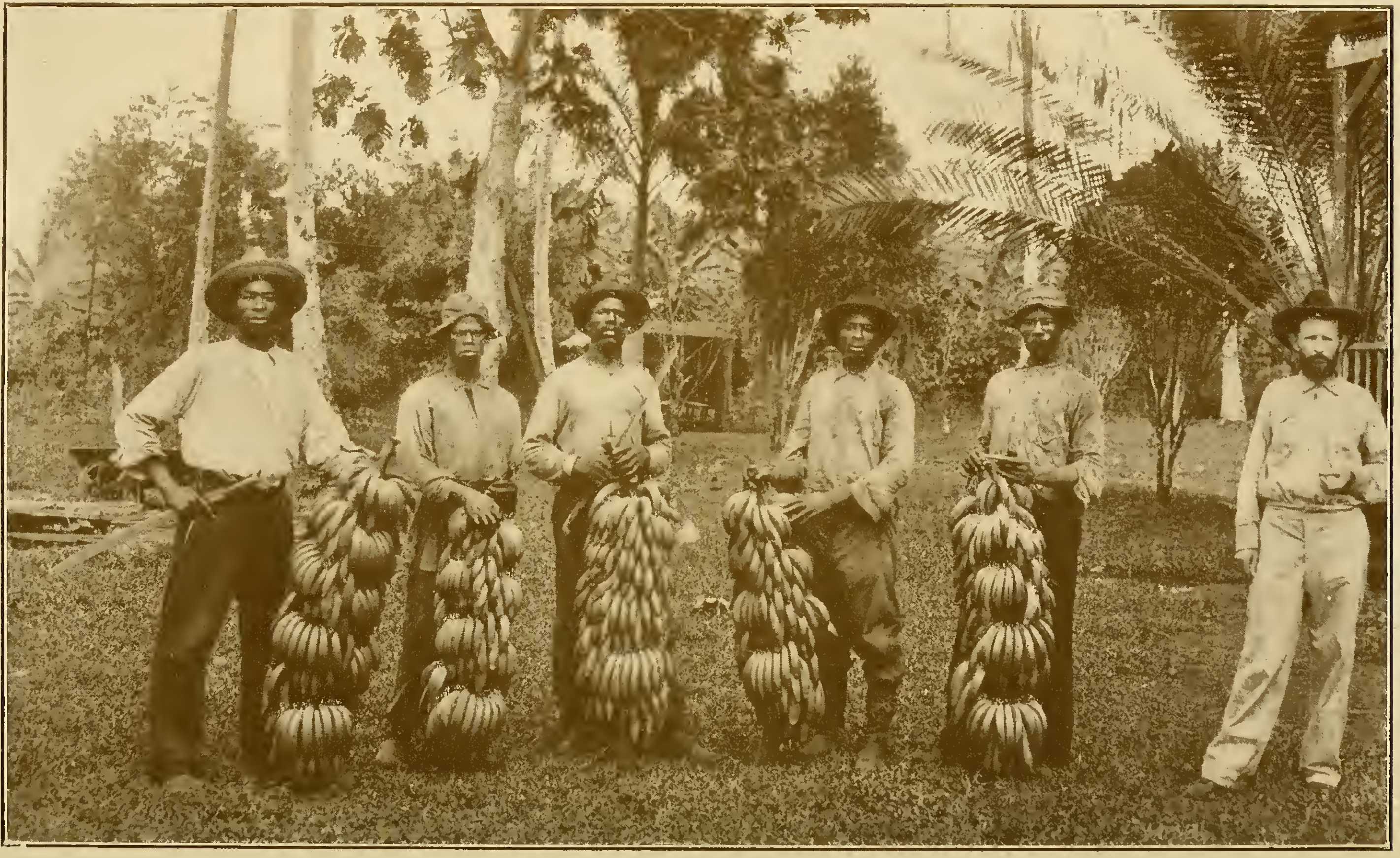
The banana as a food goes back to the very beginning of things, despite its very recent introduction into the United States. The variety *paradisiaca*, it is claimed by a few authorities, was the "forbidden fruit" of the Garden of Eden, a contention difficult to verify. Nevertheless, there can be no doubt as to the remote antiquity of its service as an aliment, for the banana plant had a diffusion possibly anterior to that of the human races. It is the staple of diet in parts of China, India, the Philippines, Egypt, Greece, Sicily, Spain, the West Indies, Mexico, Central America, and South America—countries and continents all producing varieties of the *musa*. The banana belt encircles the earth, 1,500 miles on either side of the equator. There was doubt as to whether the plant was indigenous to America. Neither Columbus nor Cortez mentions having seen bananas during their explorations; however, we have the high authority of the scientist Humboldt in the affirmative. In his explorations of the Orinoco basin he found a variety of the banana extensively cultivated by the Indians. Garcilasco de la Vega tells us they formed the staple food of the natives in the warmer zones when the Incas reigned. Curiously enough, with all this world-wide growth, the plant is very rarely found in the wild state. This is due to the fact that bananas are seedless, being propagated by means of shoots or "suckers." The cultivation of this fruit is not difficult, the hindrances of successful crops coming from heavy winds, pernicious activity of gophers, and sometimes caterpillars. Recently a disease, the cause of which is uncertain, has attacked the bananas of Dutch Guiana and Panama. The net profit per acre of a banana crop is put at $50, although much higher claims are made by land companies.

As a food the banana deserves wider recognition by the people of temperate climes, for it contains a very high proportion of nutriment, closely approximating the potato in its chemical composition.

It is the basic food supply of millions in the Tropics, and there is no good reason why it should not find a permanent place in the daily menus of the inhabitants of temperate countries. Bananas can be appetizingly cooked in various ways, while in these days of costly living their comparative cheapness should recommend them to the thrifty housewife, who seeks to curtail grocers' bills.

The by-products of the banana are few; still, in Santo Domingo a delicious sweetmeat is made from thoroughly ripe fruit. The skins are removed and the banana cut into slices about a quarter of an inch in thickness. These pieces are sprinkled with fine or powdered sugar and placed in sun laid out on clean boards or shallow trays. As the fruit dries out it is turned over several times and each time again dusted with sugar. It dries within a few days and the result is a crystallized conserve most delightful to the taste.

Banana flour is a by-product that in time may prove to be of commercial value, for is very nutritious and not inferior to corn meal. It is made by a simple process. Unripe bananas are cut and dried, then ground and sifted, and the fruit treated in this way yields 20 to 25 per cent flour. The chief difficulty encountered in flour making is preserving the yellow color. For this reason the apparatus used must be either of aluminum or silver, for iron turns the flour black. Small quantities are now exported to Great Britain. Another by-product is fiber, from which a coarse cloth is woven, while banana vinegar, sugar, and coffee attest other possible ways of treating the fruit. In Mexico the fiber is also used in the manufacture of hammocks. The question of the by-product is a very important one in this commercial age of ultimate profit, so he who discovers a practical use for the undersized bunches and waste of a banana plantation will remove one element of chance that operates most disadvantageously against the planter. The nutritive value of the banana is very high, as has already been inferred. The chemical analysis of the United States Department of



BANANA INSPECTOR AND PICKING-UP GANG.

The picking-up gangs deliver the fruit at the receiving platforms along the railroad track. An inspector watches the fruit as it is passed into the cars. He counts and grades each bunch, rejecting those that show signs of ripening and those that are undersized or bruised.

Agriculture gives the fruit a full value per pound of 460 calories, which is more than three times that of cabbage. Too much publicity can not be given this fact, for it may have a direct bearing in the future on the alimentation of the poorer people.

There are some 44 varieties of the banana, of which number the plantain (*musa paradisiaca*) and the abaca (*musa textilis*) deserve further special mention. The former is the platano of Latin America, the daily food of millions, and the latter the plant from which manila hemp is made.

The *musa* is cultivated in every country of Pan America, save only the United States, Uruguay, Chile, and Argentina, but the countries bordering the Caribbean and the Gulf of Mexico lead in the amount of exports.

Despite marvelous growth in the last decade the banana business is in its infancy, and the next 20 years will see an extension of this industry that will make it one of the most important phases of economical development throughout Pan America.

CACAO production is reported to have steadily increased during the last three years, and to be rapidly becoming one of the principal exports. Since 1904 the planting of cacao has been increasing and the results are now beginning to show. There is abundant cacao land in the northeastern part of this Republic not yet taken up. This land can be obtained reasonably from the Government, which offers every encouragement to settlers.

An executive decree of November 23, 1909, with a view to encouraging the development of agriculture in the Republic, admits imports of seeds, vegetables, and plants free of customs, wharfage, and consular duties.

The cattle imported into the Republic after January 1, 1909, were exempt from duty and at the same time the Government ceased paying a bounty on cows and heifers brought in for breeding purposes. However, until December 31, 1911, the Government will continue to pay the maritime and land freight on fine breed cows and bulls imported from Europe and the United States. Exportations of fine cattle are now subject to a head tax. The National Society of Agriculture is interested in the improvement of this branch of national industry, the establishment of pedigree registers, and the holding of agricultural and stock fairs. The society also interests itself in securing seed of the best grades for the use of agriculturists, and recommends the importation of agricultural machinery of the best type and of fertilizers.

The mining industry is in a flourishing condition, and is being encouraged and stimulated by the Government by the free importation of mining machinery, tools, implements, and materials required in the development of mines. Gold is the metal which has been most exploited. The Aguacate mines have been famous for years, and production from them has been steadily profitable from the time of their discovery. It promises now to increase materially, because modern methods and modern machinery with which the work can be prosecuted on a larger scale are being installed. The whole gold district is on the Pacific slope, within easy reach of transportation. Another group of mines is worked by the Abangares Gold Fields of Costa Rica Co., in the neighborhood of which are several other organizations worked by American capital.

While Costa Rica is not a manufacturing country, yet there are sufficient industries to supply many of their local wants. Shoes are well made there, and other articles of domestic consumption are produced by native skill.

RAILWAYS AND INTERIOR WATERWAYS.

Costa Rica has in actual operation 687 kilometers (427 miles) of railway, including branches and sidings, all of 3-foot 6-inch gauge. Of this mileage 69 miles is the property of the Government, 141 belongs to the Northern Railway Co., and 217 to the Costa Rica Railway. As a matter of fact, however, the Costa Rica Railway is leased to the Northern, so that the whole system of some 358 miles, having its focal point at Port Limon, is under one general management. Both these roads are well constructed with steel and iron bridges, suitable stations, and sidetracks, and are maintained in good condition. Various branch lines have been extended up and down the cost for the service of the banana industry. The main line leaves Port Limon, passing through Matina, Siquirres, Turrialba, and Cartage, reaching San Jose, the capital, at a distance of 103 miles. The system is continued to Alahuela, 14 miles north of San Jose.

The Pacific Railway extends from San Jose to Punta Arenas, on the Pacific coast, a distance of 69 miles. The connecting link between Cascajal and El Roble, a distance of 12 miles, was completed in October, 1910, thus affording through connection between the Atlantic and Pacific, and making the sixth transcontinental railroad route in the two Americas.

At Port Limon terminal facilities are excellent. There are two wharves with accommodations for six large and two small steamers, and so equipped with track facilities that loading and unloading can be carried on directly from the car to the vessel. At Punta Arenas the harbor has only 15 feet of water at low tide, necessitating the handling of cargo by lighters.

Slight additions were made to the mileage of the Cosa Rica Railway in 1910 by the construction of sidings in Port Limon and at other places.

The Government recently enacted a very comprehensive railroad law, the main features of which are as follows:

No railway shall be constructed in the Republic without the consent of the Congress. On the expiration of a railway concession, which shall not be granted for a longer term than 99 years, the railway shall become the property of the nation. All railway concessions are subject to the laws and regulations of Costa Rica now in force or which in future may be enacted, and no foreign contractor shall have the right to appeal to any laws other than those of Costa Rica in the settlement of any disputed questions that may arise in the construction, exploitation, or management of the railway.

No railway concession shall confer a monopoly upon any railway company, and the Government reserves the right to parallel, cross, or intersect any railway for which a concession has been granted, or to penetrate the region traversed by the same, as it may deem expedient, by means of wagon roads, canals, railways, tramways, or any other means of communication. Nevertheless, the concession may prohibit the construction of a parallel railway within certain limits for a period of 10 years. All railways and railway property are subject to the law of expropriation should the welfare of the Republic so require.

The sale, lease, or transfer in any manner whatsoever of a railway concession is subject to the approval of Congress. In no case shall a railway concession, railway, telegraph, or telephone line be sold, mortgaged, leased, or transferred in any manner to any foreign power, nor shall a foreign Government or State become a partner or owner of the stock, bonds, or obligation of any railway company. No Government railway shall be leased to individuals or companies without the consent of Congress, nor shall the Government enter into any agreement for the recession of a railway concession without first obtaining the authorization of Congress.

Companies or persons desiring to secure a railway concession must apply to the Secretary of Fomento, accompanying the application with a general plan or sketch of the line, showing the length of the road, the bridges, stations, culverts, etc., to be constructed, and the estimated cost of the road, all of which shall be subject, in case the concession is granted, to modification by the Government. All railways operating in the Republic are considered Costa Rican companies, and are subject to the laws of the land.

The law provides for Government inspection of railways, specifies the manner in which freight and passenger tariffs shall be issued, and guards, in general, the interests both of the public and of the railway companies in a just and equitable manner.

In case of war the Government has the right to suspend traffic on any railway line for the defense of the Republic, but in such case the railway company shall be entitled to indemnity.

There are two street railway lines in San Jose, both of which are operated by electricity. One of these lines has been extended about 5 miles to the adjacent village of Guadalupe.

There are no less than 16 navigable rivers in the Republic, some of which are navigable for a considerable distance inland, the most important of these being the San Juan River and its tributaries, which are largely utilized for the transportation of the natural products, several small steamers as well as other craft plying regularly between the coast and inland ports. This river, which flows along the northern boundary of Costa Rica, communicates with the beautiful Lake Nicaragua, situated in the Republic of Nicaragua, and navigable for large vessels.

THE PRESS OF COSTA RICA.

Costa Rica in its earliest history was not thickly populated, and had, moreover, such relationship to Guatemala that colonial ideas would be more apt to find outlet there than in Costa Rica itself. The despotism of colonial authorities, also, was against the press, and even in Guatemala, therefore, no newspaper was issued until 1820.

In 1827, six years after the declaration of independence of Costa Rica, the first paper worthy of the name appeared in San Jose. Hitherto the old system of making known by proclamation Government decrees had been maintained, or, as happened shortly before independence, manuscripts were circulated bearing upon the direction of opinions, to obtain for them, whether dealing with political or social matters, a wider hearing than was possible in general gatherings or at meetings called by the authorities. In 1832 the first real newspaper was published, called El Noticioso Universal, under the editorship of Joaquin Bernardo Calvo; as public opinion was by that time growing, room was made the following year for an opposition paper called La Tertulia.

The printing press is of course essential to a newspaper, and until 1883 there were only 6 presses in Costa Rica, so that publication was restricted on that account. But the people have always been well educated and great readers, and what could not be produced at home they determined to procure abroad. They have consequently subscribed generously to foreign publications and are always well informed on general public affairs, even if their local papers do not offer them the latest news in their own issues. Nevertheless, Costa Rica has had many papers worthy of notice, and their editors have been men of high standing socially, intellectually, and politically.

The three principal cities in the Republic are San Jose, the capital, Limon on the Atlantic side, and Punta Arenas on the Pacific. As would be supposed, the publishing center is San Jose, in which about a dozen papers are issued, there being, besides several dailies, also weeklies, monthlies, and annuals, including illustrated periodicals, scientific, literary, and artistic journals. In Limon a paper is published in English as well as one in Spanish. Small sheets exist in interior towns, but as a rule the San Jose papers supply the needs of the people, because railway communication across the Republic is so developed that almost all cities are in close touch with the capital and can receive the papers within a few hours after they are printed.

Daily papers are of small size, about 14 by 20 inches, and of 2 to 4 pages, with special editions when occasion offers. Their advertising rates are on the average something less than $2 (gold) per column inch a month for the dailies, or $0.12 (gold) per inch each insertion. The circulation can be estimated at between 2,000 and 3,000.

DOMINICAN REPUBLIC

The Dominican Republic occupies the eastern and larger part of the island of Santo Domingo or Haiti. It has an area of 19,325 square miles and a population (1908) of 673,611 inhabitants, or 34 per square mile. Four almost parallel mountain ranges modify the otherwise tropical climate. Mount Tina, 10,300 feet above sea level, is the highest peak on the island and in the West Indies. Nearly all of the fruits of the Tropical and many of the Temperate Zone are successfully grown. Sugar, cacao, tobacco, coffee, and bananas, as well as cabinet, structural, and dye woods, with the pods of the well-known divi-divi tree, used for tanning, are largely exported. Copper mines are worked to some extent. Iron, gold, nickel, chrome, cobalt, silver, mercury, tin, coal, asbestos, phosphate, petroleum, amber, and guano are also found. Salt is produced in abundance.

COAT OF ARMS OF THE DOMINICAN REPUBLIC.

The present constitution of the Republic went into effect April 1, 1908. It provides for a representative form of government, divided into legislative, executive, and judicial branches. The national Congress, which meets at the capital, Santo Domingo, is composed of the Senate and the Chamber of Deputies, the former composed of 12 members, 1 from each Province, and the latter of 24 members, or 2 from each Province. Senators are elected by indirect vote for a term of six years, but the Senate is renewed by thirds every two years. Deputies are also elected by indirect vote for four years, and the Chamber is renewed by halves every two years. Suffrage is free to all male citizens over 18 years of age. Congress meets annually on February 27 for a period of 90 days, which may be extended for 60 days more.

The President, assisted by a Cabinet of seven secretaries, is the executive authority of the Republic. He is elected for a term of six years by indirect vote and receives a salary of $10,800 per annum. There is no Vice President. In case of the death or disability of the President Congress designates a person to take charge of the executive office. The President and Cabinet are as follows:

President: Gen. Ramón Cáceres (inaugurated July 1, 1908).
Secretary of Interior and Police: Sr. Miguel A. Román, jr.
Secretary of Foreign Affairs: Sr. José Maria Cabral y Báez.

Secretary of the Treasury and Commerce: Sr. Federico Velázquez H.

Secretary of War and Marine: Sr. Manuel García.

Secretary of Justice and Public Instruction: Sr. Manuel de Jesús Troncoso de la Concha.

Secretary of Agriculture and Immigration: Sr. Rafael Díaz.

Secretary of Fomento (Promotion) and Communications: Sr. Emilio Tejera Bonetti.

The Department of the Interior and Police (Secretaría de lo Interior y Policía) is charged with the administration of the Provinces and municipalities, the governors of the former being responsible to the Minister of the Interior and Police, and also with the instruction and maintenance of the rural and city police forces. The general archives of the Nation and the administration of the Official Gazette are also under its care.

The Department of Foreign Affairs (Secretaría de Relaciones Exteriores) has charge of the diplomatic and consular corps, the settle ment of international boundary questions and those pertaining to relations with foreign nations.

The Department of the Treasury and Commerce (Secretaría de Hacienda y Comercio) attends to the collection and disbursement of public funds, the service of the public debt, and the preparation of commercial and other statistics.

PRESIDENT RAMON CÁCERES.

The Department of War and Navy (Secretaría de Guerra y Marina) handles all matters pertaining to the public defense and of the maintenance of the army and navy. The military academy and military hospital are also under its jurisdiction.

The Department of Justice and Public Instruction (Secretaría de Justicia é Instrucción Pública) has charge of the courts, penal institutes, and all matters pertaining to education as well as those relating to the Roman Catholic Church.

The Department of Agriculture and Immigration (Secretaría de Agricultura é Inmigración), recently created, has devoted its attention to the promotion of agriculture. It is organizing a school of agriculture and an experimental farm, improving the live stock of the country and studying means for increasing immigration. It also publishes a monthly bulletin.

The Department of Promotion and Communications (Secretaría de Fomento y Comunicaciones) has in charge all public works as well as control of all railways, posts, telegraphs, telephones, bridges, and roads, the construction and improvement of the ports of the country, the building of sewers and waterworks, irrigation projects, and the registration and granting of patents, trade-marks, and mining claims.

The judiciary consists of a supreme court of eight members, appointed for terms of four years, sitting at Santo Domingo, two courts of appeal, and lesser tribunals.

The personnel of the army numbers about 1,300. There is also a rural guard with a force of 906 officers and men. The navy consists of six vessels, four of which are revenue cutters.

THE GOVERNMENT HOUSE AT SANTO DOMINGO, THE CAPITAL OF THE DOMINICAN REPUBLIC.

During the year the telegraph lines have been increased by 212 kilometers. Adding to this the 1,444 kilometers which were in service the year before makes a total of 1,656 lines the property of the State. These new branches connect the towns of La Vega and Bonao; Seybo and Hato Mayor; Santiago and Peña; Barahona and Cabral; Cabral and Neiba; and Neiba and Tierra Nueva. Consequently these places are now in direct communication with the other points of the Republic already on the national system. The Government has under consideration the establishment of a school to prepare the youth of the country for service in telegraph and telephone operation. The international line to connect the capital with the Republic of Haiti has been continued forward so that only a slight gap remains yet to be completed.

For administrative purposes the Republic is divided into 12 Provinces, which are subdivided into communes. The Provinces are administered by governors appointed by the President, as are also the chief executive officers of the other political divisions.

DOMINICAN REPUBLIC IN 1910.

The people and the Government of the Republic enjoyed a year of peace, and efforts were continuously made to improve the interior organization of the country. The threatened conflict with the Republic of Haiti was averted by international agreement, and it was really of benefit to both, because it promises to hasten the settlement of the boundary question which has so long existed between the two countries.

TYPICAL STREET SCENE IN SANTO DOMINGO, DOMINICAN REPUBLIC.

The Republic exhibited in several foreign cities during the year, and in Brussels numerous premiums were awarded. This was a very encouraging sign and all effort should be made to raise the standard of product, especially in agriculture, so that a favorable showing with those of other countries might be assured.

In the matter of public works, satisfactory progress has been made. The port of Santo Domingo has been improved and the highway planned across the country was completed as far as the eastern bank of the Jaina River. Negotiations were advanced for a railway from the capital northward.

Both exports and imports increased during 1910, and consequently the revenue from the customhouse was greater than that of 1909. The same satisfactory condition of general revenue prevailed, for the total income for 1910 surpassed that for the previous year. The process of the public debt was completely met.

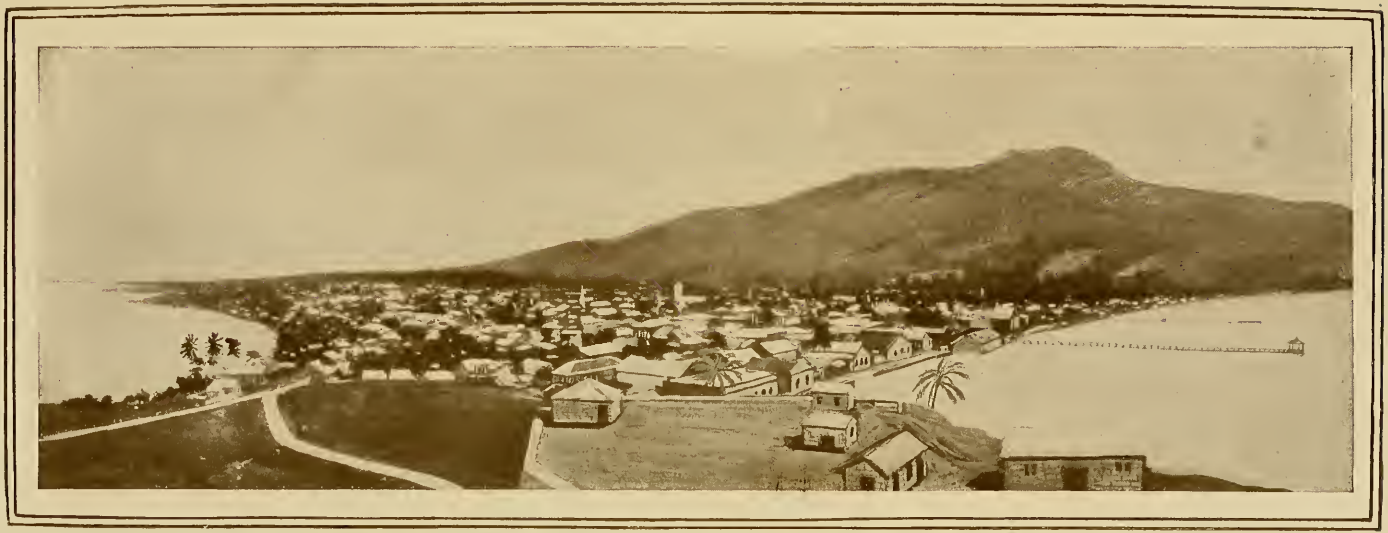
The President, in his annual message reviewing conditions of the year passed, called attention to public instruction, which, he said, was still in its infancy and must be improved in order to place the young of the Republic in a fitting condition to take their place in the active world. This branch of the public service must be carefully expanded. An indication of what the Government proposes is the intended opening of a farm school in San Cristobal near Santo Domingo.

During the year 1910 the number of schools in the Republic was 526, against 481 in 1909, or an increase of 9 per cent. The school population is given at 18,812 children, which is equivalent to 2.78 per cent of the total population.

Agricultural conditions have improved during the year, although certain misfortunes have seemed unavoidable. The cacao is passing through a crisis due to the invasion and destructive consequences of a parasitic disease, especially in the Provinces of Samana and El Seybo. Strong efforts are making to bring this under control. Coffee, which has always been a staple crop in the country, has felt the decline of prices which spread over the entire world when the relation between supply and demand was disturbed, but in this case also the signs were encouraging for meeting this condition by the introduction of modern methods of cultivation. Tobacco held its usual favorable place in production. The cultivation of cotton promises a new field for national industry and wealth, and the Government is trying to aid those who give serious attention to it.

The Central Railroad, which for the last three years has been under the control of the Government, shows a profit even greater than hitherto. Studies for the prolongation of the Samana line to Moca, have been concluded during the year.

Negotiations were in progress during the year for the organization of a new bank in the Republic, and were satisfactorily concluded early in 1911. The institution is to be called the National Bank of Santo Domingo, located in the capital, with branches in other cities as soon as they can be established. The authorized capital is $2,000,000, and the amount paid in is $500,000. The President is Mr. Frank J. R. Mitchell, of Chicago. The stockholders are intimately associated with the National Bank of Cuba, of which Mr. Samuel M. Jarvis is the President.



PANORAMIC VIEW OF PUERTO PLATA, THE SECOND CITY IN THE DOMINICAN REPUBLIC.

FINANCE.

The receipts and expenditures of the Dominican Republic for the year 1910, according to the report submitted to President Cáceres in February, 1911, by Sr. D. Federico Velázquez H., Secretary of State for Treasury and Commerce, were: Receipts, $4,705,738.20, and expenditures, $4,645,287.43. These figures show a surplus of $60,450.77.

RECEIPTS.

The receipts were as follows:

Customs duties	$3,121,641.81
Port dues	60,366.02
Liquor tax	266,828.98
Stamp tax	127,356.37
Postal surplus	32,718.00
Stamped paper	78,613.64
Telegraph and telephones	13,429.26
New York consulate	17,661.45
Civil registry	4,326.56
Public sales	519.42
Rio Ozama light tax	2,258.64
Leases	854.57
Central Railway	284,421.72
Macoris wharfage	$148,732.70
Puerto Plata wharfage	67,726.30
Azua wharfage	15,133.04
Monte Cristi wharfage	7,915.59
Mines	222.80
Back collections	2,750.25
Chattel sales	4,709.48
Miscellaneous	4,406.95
Drafts on Morton Trust Co.	197,971.52
Drafts on Guaranty Trust Co.	245,173.13
Total	4,705,738.20

The customs duties were reduced in 1909, the reductions going into effect on January 1, 1910. These reductions amounted to approximately 13 per cent on imports and 50 per cent on exports. Notwithstanding the reductions, the customs collections during the year 1910 exceeded the collections of the preceding year by $346,933.18. In reality this is an understatement, since on January 1, 1911, there were import duties due but not yet collected amounting to $92,456.04 on goods arriving near the end of the year. If this amount be added to the above, the total of duties payable on goods arriving during the year under the decreased tariff is in excess of the total of the preceding year by $439,389.22.

Of the amount of customs duties collected, as stated in the foregoing table, $2,923,932.20 represented imports and $197,709.61 exports.

There was likewise a considerable decrease near the end of 1909 and effective during the whole of the year 1910 in the rate of port dues. These dues were considerably reduced and ships in ballast were made exempt. On account of these reductions there was a decrease in the collections of port dues from $105,045 for 1909 to $60,366 for 1910.

The liquor tax showed a slight decrease for the year 1910 as compared with 1909, amounting to $14,760.37.

The receipts from the stamp tax, postal revenue, stamped paper, and telephones, New York consulate, and leases altogether, increased about 27 percent as compared with the preceding year.

Receipts from the civil registry, public sales, and the Rio Ozama light tax decreased as compared with the preceding year about 23 per cent.

Of the amount given in the foregoing table as receipts from the Central Railway, $281,517.36 represent freight and passenger receipts. The railroad has now been owned by the Government three years and has proved a valuable investment, the net receipts for 1910 being $73,419.40, which represents 5½ per cent on the estimated value of the road, $1,322,557.23.

EXPENDITURES.

The expenditures for the year 1910 were as follows:

Legislature	$91,229.82
Presidency	20,958.76
Judiciary	92,345.00

Department of Interior and Police	$670, 453. 55
Department of Foreign Relations	106, 546. 54
Department of Treasury and Commerce	1, 939, 105. 90
Department of War and Marine	521, 359. 74
Department of Justice and Public Instruction	299, 522. 25
Department of Agriculture and Immigration	11, 219. 19
Department of Fomento and Communication	238, 929. 40
Amounts refunded on account of certain wharfage improvements	618. 14
Samana to Santiago Railway	4, 252. 16
Refund to importers	9, 046. 72
Refunds on account of alcohol exported, denaturalized, fines, and excess payments	19, 086. 91
Public works	268, 937. 19
National Palace	27, 747. 21
Purchase of realty	2, 965. 30
Survey of the San Pedro de Macoris highway	279. 48
Survey of lands	118. 50
Blanton refund	5, 000. 00
Sundry payments	65, 116. 56
Vouchers of the general accounting office of the treasury canceled	250, 449. 11
Total	4, 645, 287. 43

FOREIGN COMMERCE.

The total foreign trade of the Dominican Republic for the year 1910, according to the report presented to President Cáceres by Sr. Don Federico Velázquez H., Secretary of State in the Department of Treasury and Commerce, in February, 1911, amounted to $17,333,209, of which $6,408,838 were imports and $10,924,371 were exports. The report states that the increase for the year 1910 over the figures for 1909 were: Imports, $2,047,410; exports, $2,361,600; total, $4,409,010.

The total foreign trade, compiled from data furnished the Pan American Union by the General Receivership of the Dominican Republic, for the year 1910 amounted to $17,107,314, of which $6,257,691 were imports and $10,849,623 exports. For the year 1909 the figures were: Imports, $4,425,913; exports, $8,113,690, or a total of $12,539,603. There was, therefore, an increase in imports in 1910 as compared with 1909 of $1,831,778, and exports $2,735,933, or a total increase for the year of $4,567,711.

The figures of the two reports, while apparently differing, are in reality derived from the same source. The data furnished by the General Receivership includes only imports on which duties had prior to January 1, 1911, been already collected. The report of the Secretary of State and Commerce takes into account, in addition, other goods which in the closing days of the year were actually imported, but upon which the customs duties remained unliquidated.

IMPORTS.

The imports for the last three years by countries of origin were as follows:

[The figures for 1908 and 1909 are from the reports of the General Receiver of Customs.]

	1908	1909	1910
United States	$2, 532, 034	$2, 374, 025	$3, 884, 918
Germany	868, 230	911, 976	1, 108, 375
United Kingdom	788, 621	576, 516	708, 612
France	212, 002	188, 948	226, 667
Spain	123, 194	69, 216	128, 973
Italy	116, 428	103, 444	85, 877
Other countries	127, 266	201, 788	265, 416
Total	4, 767, 775	4, 425, 913	6, 408, 838

The imports by principal articles for 1908, 1909, and 1910 were as follows:

	1908	1909	1910
Cotton manufactures	$1,186,551	$925,970	$1,481,344
Iron and steel	605,246	609,416	863,334
Rice	360,728	414,271	497,046
Meat and dairy products	245,371	242,055	416,291
Flour, wheat	308,071	309,282	410,705
Oils	241,341	226,065	337,550
Leather, and manufactures	112,220	140,751	208,587
Woods, and manufactures	150,841	153,600	204,734
Fish, preserved, and fish products	121,726	108,453	184,779
Vegetable fibers, and manufactures, other than cotton	186,954	128,776	171,299
Chemicals, drugs, and dyes	96,388	88,307	143,275
Sugar, refined, and confectionery	107,718	79,055	96,540
Beer, bottled	64,678	68,702	88,669
Soap	63,520	68,669	75,560
Paper, and manufactures thereof	43,906	52,846	74,465
Vegetables [1]		42,221	63,984
Breadstuffs, other than wheat flour [1]		44,405	58,655
Hats and caps [1]		42,068	58,245
Wines and liquors	47,752	45,264	51,342
Vehicles	41,859	49,341	51,019

[1] Figures not available for 1908.

These figures are from data furnished by the General Receivership, the corresponding data not being given in the report of the Secretary of State for Treasury and Commerce. The figures therefore are slightly less than the actual importations and represent, as stated above, imports on which the duties were collected before January 1.

The importation by countries and values of the articles given above for the year 1910 are as follows:

Cotton manufactures: United States, $822,785; United Kingdom, $452,962; Germany, $109,364; France, $26,865; Spain, $28,328; Italy, $16,606; Porto Rico, $14,203. The increase in imports from the United States was about $433,000 and from the United Kingdom $110,000.

Iron and steel manufactures: United States, $631,461; United Kingdom, $152,773, Germany, $55,746; France, $11,459. The increase for the year from the United States was nearly $250,000 and from the United Kingdom $11,000. There was a decrease of $7,000 from Germany.

Rice: Germany, $450,370; United States, $14,053; United Kingdom, $8,792. The increase from Germany was nearly $60,000, and from the United States about $5,000. There was a slight decrease from the United Kingdom.

Wheat flour: Practically all of the wheat flour came from the United States in both 1909 and 1910.

Meat, and dairy products: United States, $207,710; Germany, $107,871; Porto Rico, $31,634. The increase from the United States was over $90,000; from Germany nearly $40,000; and from Porto Rico about $5,000.

Oils: United States, $296,752; Spain, $20,258. The increase of the United States was about $97,000, and of Spain nearly $13,000.

Woods, and manufactures: United States, $186,003; Germany, $11,709, an increase from the United States of over $40,000, and from Germany of nearly $7,000.

Leather, and manufactures: United States, $17,734; Germany, $15,219; United Kingdom, $6,622. Increase of United States about $56,000; United Kingdom, nearly $3,500 and Germany, $8,600.

Vegetable fibers: United States, $74,439; United Kingdom, $45,375; Germany, $35,206; France, $5,142; Spain, $5,125. There was a decrease of $4,000 from Germany and an increase from the United States of $25,000; from United Kingdom an increase of $11,000; from France $3,400; and from Spain an increase of $2,600.

Fish, preserved, and fish products: The great bulk of the importations for 1909 and 1910 was from the United States, with small quantities from Porto Rico, Germany, and Spain.

Chemicals, drugs, and dyes: United States, $93,740; France, $31,562; Germany, $10,859. The increase of the United States was about $36,000; of France, nearly $10,000; and of Germany over $6,000.

Sugar, refined, and confectionery: Nearly all from the United States both for 1909 and 1910.

Beer, bottled: Germany, $75,910; United States, $9,465. The increase of Germany was nearly $19,000, and of the United States about $1,300.

Soap: Nearly all from the United States for both years.

Breadstuffs, other than wheat flour: The bulk for both years from the United States. Hats and caps: Italy, $36,673; France, $6,263; Porto Rico, $4,634; United States, $4,363; Germany, $3,178; and Spain, $2,086. There were slight increases from all the countries except France. The income from the United States was nearly $3,000.

Paper, and manufactures: Germany, $34,902; United States, $29,097; Spain, $3,583; France, $2,458.

Vegetables: United States, $28,839; Porto Rico, $14,212; Spain, $12,492.

Vehicles: United States, $33,899; Germany, $15,593, a decrease for the United States of over $9,000 and an increase for Germany of over $10,000.

WATERFALL IN PUERTO PLATA PROVINCE, DOMINICAN REPUBLIC.

Wines and liquors: France, $21,390; Spain, $16,158; Germany, $5,347; Italy, $5,001, a gain of nearly $3,000 for France, of over $8,500 for Spain, and a loss for both Germany and Italy.

Of the import trade from the United States for 1910, amounting to $3,739,025, $3,411,976 was carried in American, $222,617 in Norwegian, $85,694 in British, and $1,981 in Dominican bottoms.

Of the import trade from Germany, amounting to $1,080,241, $1,065,077 was carried in German, $14,495 in French, $526 in Dutch, and $143 in American bottoms.

Of the import trade from the United Kingdom, amounting to $715,400, $552,829 was carried in German, $154,836 in French, $5,092 in British, and $2,643 in American bottoms.

Of the import trade from France, amounting to $210,269, $173,743 was carried in French, $35,438 in German, $993 in American, and $95 in Dominican bottoms.

Of the import trade from Spain, amounting to $123,453, $91,436 was carried in Spanish, $10,698 in German, $7,545 in American, $669 in Norwegian, $592 in French, and $310 in Cuban bottoms.

EXPORTS.

The exports for the last three years by countries of procedure were as follows:

[Figures taken from data furnished by the General Receivership.]

	1908	1909	1910
United States	$4,122,592	$4,709,354	$7,661,303
Germany	4,220,289	2,182,127	2,094,033
France	907,898	924,015	723,834
United Kingdom	20,038	76,915	141,947
Porto Rico	19,955	16,327	63,443
Italy	13,268	15,616	22.014
Other countries	92,447	189,336	143,049
Total	9,396,487	8,113,690	10,849,623

The figures given for 1910 in the total above for the United States, if restated on a basis of ultimate consumption, would probably be reduced by about $6,000,000, the largest share of which would be added to the United Kingdom, with large additions to Germany, Canada, and other countries.

In the report of the Receiver General of customs, from which these figures are taken, it is noted that of the two principal exports of the Dominican Republic, sugar and cacao, as to the first: "Much cacao is shipped to New York for order, and it is probable that a large part that is shown as to the United States is reshipped to Europe," and of sugar: "It is understood that some of the sugar that goes to New York is reshipped to Canada and England." The figures given in the report are the figures for the cargoes for destinations as manifested and do not represent the ultimate destination. It is not possible, in the case of the Dominican Republic, to arrive at an exact computation of the ultimate destination of cacao and sugar. It is probable in the case of cacao that about half the shipments to New York finally reach Europe, probably Germany. In the case of sugar, being a dutiable article in the United States, it is possible to arrive at more exact figures, as noted below.

The exports by articles for the three years were as follows:

	1908	1909	1910
Sugar, raw	$3,092,429	$3,304,931	$5,590,536
Cacao	4,269,047	2,759,191	2,849,585
Leaf tobacco	1,009,608	1,239,486	958,441
Coffee	325,153	128,202	323,749
Bananas	234,002	125,766	288,647
Wax	123,690	123,769	148,804
Hides of cattle	68,882	70,996	123,732
Goatskins	53,889	60,361	86,084
Honey	18,229	43,045	53,322
Drug and dye materials	53,804	38,060	80,509
Lignum vitæ	16,990	34,829	79,974
Live animals	575	33,765	48,398
Cigars and cigarettes	14,573	16,768	22,103
Mahogany	17,051	10,981	13,579
Woods, other than specified	37,358	78,567	56,104
Sisal and other fibers	19,102	10,707	25,519
Copra	2,613	5,812	14,543

	1908	1909	1910
Gums and resins	$9,399	$2,208	$1,762
Coconuts	3,697	1,638	4,020
Other exports	26,396	24,608	80,212
Total	9,396,487	8,113,690	10,849,623

The exports by countries and articles for the year 1910, as given in the report, are as follows:

Sugar, raw: United States, $5,517,202; United Kingdom, $71,456; France, $330; other countries, $1,548; total $5,590,536.

The report of the Bureau of Statistics of the Department of Commerce and Labor of the United States gives as a value of the raw sugar imported and entered for consumption into the United States from the Dominican Republic for the year 1910, $108, 528. This would show that of the sugar above, over $5,400,000 manifested to New York, in reality went elsewhere.

Cacao: United States, $1,509,333; Germany, $793,998; France, $545,960; other countries, $294,000; total, $2,849,585.

Cacao being a nondutiable article in the United States, it is not possible to show from the reports of the United States Bureau of Statistics the amount thereof received from the Dominican Republic and consumed in the country. Under the head of exports of foreign merchandise in the report for 1910 appears the item, "Cacao, crude, $543,174."

Since no cacao is produced in the United States, the item clearly represents reshipments. The probabilities are that of all the cacao stated as shipped to the United States a large part ultimately reaches Europe, for the most part Germany.

Leaf tobacco: Germany, $890,831; United States, $22,906; France, $19,335. There was a decrease in the exports to Germany of nearly $200,000, and to France of $6,000, and an increase in the exports to the United States of about $17,600.

Coffee: France, $114,322; Germany, $113,982; United States, $67,972; Italy, $20,786. The increase in exports to the United States was over $47,000; to Germany, over $73,000; to France, $68,000; and to Italy, over $5,000.

Bananas: Practically all of the exports for both years were to the United States.

Wax: Germany, $89,729; United States, $42,798; France, $15,631. The export to Germany increased by over $17,000, and to the United States it was more than double that of the preceding year; to France there was a decrease of nearly $7,000.

Hides of cattle: Germany, $98,156; Porto Rico, $13,754; France, $5,761; United States, $4,944.

Goatskins: United States, $55,218; Porto Rico, $26,468; Germany, $2,770.

Honey: Germany, $40,652; United States, $5,653; France, $5,332.

Drug and dye materials: United States, $45,248; Germany, $20,733; United Kingdom, $6,592.

Lignum vitæ: United Kingdom, $39,710; United States, $27,040; Germany, $5,277.

The mahogany exports, as well as those of other woods, were nearly all to the United Kingdom and the United States in about the same proportion as lignum vitæ.

Of the export trade to the United States for 1910, amounting to $7,661,303, $3,395,592 was carried in American, $3,088,754 in Norwegian, $955,217 in British, $168,889 in German, $3,005 in Dutch, and $346 in Diminican bottoms.

Of the export trade to Germany, amounting to $2,094,033, $1,650,785 was carried in German, $320,095 in American, $68,837 in French, $20,068 in Dutch, $15,550 in Norwegian, $10,800 in British, and $7,900 in Dominican bottoms.

Of the export trade to France, amounting to $723,834, $352,445 was carried in French, $341,078 in German, $21,805 in American, and $8,506 in Dutch bottoms.

Of the export trade to the United Kingdom, amounting to $141,947, $51,360 was carried in British, $41,331 in American, $19,143 in Dutch, $13,245 in Norwegian, $6,743 in German, and $4,613 in Dominican bottoms.

CARRYING TRADE.

The following table shows the value of the imports and exports for 1910 as carried under the different flags engaged in trade with the Republic:

[Figures taken for data furnished by the General Receivership.]

Nationalities.	Imports.	Exports.	Total.
American	$3,518,151	$3,799,996	$7,318,147
German	1,796,823	2,205,771	4,002,594
Norwegian	225,733	3,125,049	3,350,782
British	94,779	1,021,368	1,116.147
French	387,996	427,255	815,251
Dutch	14,740	61,027	75,767
Spanish	91,479	520	91,999
Dominican	39,607	35,634	75.241
Cuban	58,247	14,115	72,362
All other	30,136	158,888	189,024
Total	6,257,691	10,849,623	17,107,314

PRODUCTS AND INDUSTRIES.

Although agriculture must be considered the great source of natural wealth of the country, it should not be forgotten that, like Cuba, the entire island, including both Republics, has well-known deposits of minerals, and was worked for such after the Conquest. Gold was paid in tribute to Columbus, and some gold is now washed from the sands of several rivers of the country by natives. Other important minerals are copper, silver, and iron; lignite, salt, and petroleum are known to exist.

Recently a good copper property has developed not far from the capital, Santo Domingo, and as modern methods are used, with not very difficult transportation to the coast, the promises for commercial profit are encouraging. The Government has recently passed a mining law, so that thorough protection is given to those who desire to investigate the mineral possibilities of the country.

The principal opportunities are to be found, however, in the forests and the soil. The forests are noted for their variety of growth, because with such a diversity of climate it is to be expected that different genera and species of trees will flourish. Although many kinds of trees thrive together, yet in places a single species predominates almost exclusively. Thus at certain altitudes extensive forests of pine are found, reaching to the mountain tops. These areas are not at present available, owing to lack of good roads, so that most of the woods cut come from places near the coast, and are hard cabinet woods, such as have for generations been known as products of the Tropics. There are sawmills in operation in the cities of La Vega, Santiago, on the coast near Azua, and at the mouth of the River Soco. The lumber industry of the country is nevertheless in its infancy.

Annual agricultural crops, on the other hand, have been staples in the country for years. The soil is of the richest and most productive in the world and well repays any labor and time spent upon it. The best-known crops are sugar cane, cacao, tobacco, coffee, and bananas, while cotton yields excellent results, and with modern methods, and, especially since the Government aids the planter whenever possible, the output ought to increase with benefit to all.

Cacao and tobacco grow throughout the great valley of the Cibao and in other parts also where a suitable climate is found, and are staples of exports. Cigars and cigarettes are manufactured in the Republic in increasing quantities, and thoroughly

PICKING CACAO PODS.

The extent of cacao cultivation in the Dominican Republic is indicated by the fact that this product occupied second place in the value of the country's exports during the past few years. During 1910 cacao shipments amounted to nearly $3,000,000. The average cacao tree will continue to yield until it is 60 years old; in the Dominican Republic there are trees still bearing claimed to be all of 100 years old.

equipped factories manufacturing grades of excellent quality supply the needs of the local consuming public. The cultivation of bananas is a new industry, but the soil is so favorable that it has already proved a success.

Dairying and the opportunities for it should be emphasized, for there is splendid prospect in the Republic for developing that farm work. In the same way the cattle industry promises good returns, as a large proportion of the land in service is or can be devoted to grazing, but, even so, little meat and few cattle are exported. Pastoral products are now imported, but if the industry were developed as the country deserved, exportation could be the rule.

The sugar crop of the Dominican Republic has always been a bountiful one, although at times the figures for the export of cacao have exceeded those for sugar. The product of the country has always had a very enviable reputation and spread the fame of the island in Europe when little else was known of the West Indies.

HEAVY GROWTH OF PINE NEAR JARABOCOA, DOMINICAN REPUBLIC.

The lumber industry of the country, though still in its infancy, is exceedingly rich in its possibilities. Because of the diversity of the climate, the forests permit a variety of growths. At present pine, lignum vitæ, and mahogany comprise the bulk of the lumber exports.

SUGAR was unknown in Europe 500 years ago. To-day it ranks next to bread and meat as an aliment. In the sixteenth century it cost $2.45 a pound; to-day it costs 5 cents.

The luxuries of man soon become his necessities, and he works with intense thought and labor for the things of which he once was wholly ignorant. The sugar of commerce is an artificial article, yet the saccharine principle is found in almost all the plants we use. Not alone does the cane and the beet root contain stores of the sweet, but also corn, sorghum, bamboo, palms, maple trees, and all the fruits hold high percentages of sugar. At one period it was proposed to grow watermelons and extract their sugar contents for use commercially, but the refrigerator car made it more profitable to supply them whole to the market.

Etymologically sugar would seem to be of Eastern origin, the earliest forms of the word being *sarkara* in Sanscrit, and *sakkara* in Pracit. Thence the vocable may be traced through all the Aryan languages to *saccharum* in Latin, *sucre*, French, *zucker*, German, and sugar in the English tongue.

The country of origin is either India or China, although a few authorities claim that real sugar cane was first found in the South Pacific islands. In India to-day, beyond the domain of the English, natives will be found grinding the cane in the same way and with the same implements that served their forefathers in most remote times.

Sugar was introduced into Europe about the time of the Crusaders, and its cultivation spread from the basin of the Mediterranean to Madeira and the Canary Islands, whence it was carried to the West Indies in 1500–1600, although there is strong evidence in favor of the supposition that several kinds of sugar cane are indigenous both to the West Indies and almost the whole continent of South America. From the extensive growth of sugar in the western Tropics there ensued large importations of the raw article into Europe, and the introduction of tea, coffee, and cocoa about the same time created a general and wide demand for what had hitherto been regarded as a medicine rather than a nutritive article of diet.

The term "sugar" is a general one, applied to several compounds of carbon, hydrogen, and oxygen, chemically known as the carbohydrates, all of which possess a sweet flavor. Of the various sugars only four are of importance: cane sugar (technically sucrose); grape sugar, or glucose; fruit sugar, fructose; and milk sugar, or lactose. Sucrose, which general term covers the cane, beet root, and sorghum, is the sugar of commerce. Sugar cane is a gigantic grass that grows from 5 to 15 feet in height and from 1 to 2 inches in diameter. It is made up of short sections connected by nodes or knots, the spaces between the nodes being termed "internodes" or "joints." The internodes contain the sugar, while the nodes have an eye or bud from which the cane is grown, it being impracticable to raise the grass from seed. The leaves, which sprout on alternate sides of the nodes, grow to a length of about 3 feet 2 inches wide at the base and tapering gracefully up. When only a few weeks old the plants are green, but as they mature some remain green, while others become purple, striped, yellowish green, etc., the color depending upon the variety, of which there are a great many. Soil and climate naturally have a direct influence on the cane, while in Cuba certain winds are supposed to affect the growing crop favorably or unfavorably. Sugar cane is cut at different seasons in different countries, and the instrument used is a large steel knife, with a blade 18 to 30 inches long, which is called a "machete" in Spanish-speaking countries. The work of cutting must be performed by hand, no machine having as yet been perfected which will supplant manual labor in this direction.

There are, in practice, two general methods of extracting the sugar from the cane, namely, milling and diffusion, although within the last year experiments have been carried on in shredding, which, should they prove successful, will revolutionize that feature of the sugar business. The processes of treating the raw product are complicated and varied, requiring the most expensive machinery and considerable technical knowledge, thus making the "ingenio," as the sugar mill is called throughout Spanish-America, an elaborate plant, involving an expenditure of at least a million dollars. The sugar planter must have large financial backing. Napoleon was the father of the beet-sugar industry. Margroff, a member of the Berlin Academy of Sciences, discovered sugar in the ordinary beet in 1747, but it was in very small quantities, and a half century later Karl Franz Archard was more successful. Napoleon hoped to make the process a great national industry, and to this end encouraged it by high protection and the establishment of sugar schools. The industry has proved a distinct success in the United States, but not, however, until after many early failures.

The by-products of the various stages of sugar production from cane and beet root are similar in character and uses. "Tops," "crowns," "pulp," and "press cake" are utilized as fertilizers and stock food, while bagasse, the residuum of ground cane, is a useful fuel. Molasses is perhaps more valuable as the basis of rum and alcohol than in its original composition. The rum of Jamaica has been a famous by-product of the cane of that island since the time of the pirates, and Bacardi, a rum made in Oriente Province, Cuba, is another high-grade liquor of that class. Millions of gallons of molasses were wasted in the cane-growing countries before profitable uses for the low grades were discovered. This wastage no longer exists for a process has been discovered that assures excellent results from the extraction of alcohol from the crudest kind of cane and beet-root molasses. Candy, which is sugar treated in different ways, can hardly be called a by-product, and yet it is one of the most important commodities of which saccharine is the base. The annual consumption of candy in the United States is valued at $500,000,000, and by far the greater portion of this is eaten by the poorer people. This fact finds its reason in the peculiarly nutritious quality of sugar and that it is a cheap food which fills a certain want in the diet régime. As an aliment it is distinctly energizing and is supplied to the United States Army with this end in view.

The world's sugar production and consumption show constant yearly increase, and there can be no doubt but that the cultivation of sugar cane, which grows profusely in all the Latin American countries, will be one of the greatest resources of Pan America. The Dominican Republic, with increasing yearly output, is a present example of what the future holds in the development of this industry.

RAILWAYS AND INTERIOR WATERWAYS.

The railways of the Republic have an extent of approximately 150 miles (241 kilometers). There are besides about 225 miles (362 kilometers) of private lines on the large estates.

A law of the Dominican Government provides that 30 per cent of the internal revenues be applied to the payment of interest on capital invested in the building of railroads, whether by private corporations or borrowed by the Government. It further provides that interest may be paid up to 6 per cent; that a bonus of $2,000 be allowed for each kilometer constructed, and that this portion of the revenues shall not be used for any other purpose.

The Dominican Central Railway, which formerly belonged to an American company, became by virtue of a contract made by the Government in February, 1908, the property of the Republic. This road connects the two important cities of Puerto Plata and Santiago with an extension to Moca, and has a length of 60 miles, 28 of which run through broken and mountainous lands.

The Samana and Santiago Railway extends from Sanchez to La Vega, with a branch to Salcedo. Plans have been completed for the extension of this branch to Moca to connect with the Dominican Central Railway, and construction work is soon to be commenced. The total number of miles of this road now in operation is 73.

Plans have been made for a deviation of the line of the Dominican Central Railway from a point at the base of San Marco Hill, near Puerto Plata, to Bajabonico. This will obviate the necessity of using the rack system which is now in operation on a portion of that line.

Negotiations have been entered into by the Government with the Samana and Santiago Railway for a line to be constructed from the capital to connect with the former line. Preliminary survey work has already been commenced on this route, which will pass through an exceedingly fertile section of the Republic and will open up for development a large territory which has hitherto been without transportation facilities.

Santo Domingo, the capital of the Republic, is situated at the mouth of the Ozama River, which is navigable for a considerable distance inland, as are also the Rivers Yaque del Norte, Yaque del Sur, Yuna, Iguamo, and several others, some of them, however, only for vessels of light draft.

THE PRESS OF THE DOMINICAN REPUBLIC.

Since the actual independence of the Republic was not established until after 1844, no great effort was made until after that date to found a periodical press in the true sense of the word. Moreover, the population was scarcely large enough to warrant the regular publication of a newspaper which should depend upon its circulation for its commercial success.

THE RACK RAILWAY NEAR PUERTO PLATA, DOMINICAN REPUBLIC.

Plans have been made for a deviation of the line of the Dominican Central Railway from the base of San Marco Hill to Bajabonico which will obviate the necessity of using the rack system now in operation on a portion of the line.

Intellectual life has, however, been vigorous on the island and especially within the capital of the present Republic and the towns in communication with it. There have been literary clubs and associations for the encouragement of scholarship in the country. But this could not find a permanent support until the printing press became active, and even as late as 1871 there was only one press in the island, which did the job work and ran off the few papers which might be issued for general distribution.

In 1888 periodical publications had become well recognized. In the capital, Santo Domingo, 5 papers were regularly circulated; in Puerto Plata, 1; and 1 each in Santiago, Azua, Moca, Monte Cristi, and Samana. These seem to have disappeared with the changing years, leaving as the oldest newspaper in the Republic the Listin Diario, founded in 1889. This has lived down to the present day.

There is a decidedly larger number of papers of all kinds in existence to-day, with additions in Santo Domingo, Puerto Plata, and Santiago, there being 13 in the first-named city, 5 in Puerto Plata, 4 in Santiago, 2 in San Pedro Macoris, and 1 each in San Cristobal, Monte Cristi, Moca, and La Vega. The largest paper measures 23½ by 18½ inches; the others are smaller. As a rule, they have but 4 pages, although on special occasions more may be added.

The first page is usually given to display advertisements and general news, the second and third pages almost altogether to news and other articles of similar character, and the fourth page is practically filled with advertisements. These frequently carry illustrations or cuts of some sort, and use quite large type. Railway and steamer time-tables are always printed.

PASSAGE INTO THE ISLAND, "LEVANTADO," SAMANA, DOMINICAN REPUBLIC.

The coral steps shown are said to have been cut by the Buccaneers who frequented this island in the early days.

In the best-known dailies the circulation runs from 500 to 5,000. While the reading page allows for 6 to 7 columns, the advertisements are extended across one or more of them. Rates therefore vary according to position reserved. One dollar per square inch per month is one price, but lower rates are quoted, especially for continued contracts. The highest price is for a full page during the whole year for the daily edition.

MEXICO

Mexico is the fourth largest American Republic as regards territory, having an area of 767,097 square miles (including islands) and a population (1910) of 15,063,207, or 19.6 per square mile. Two mountain chains traverse the Republic, forming between them a number of valleys and plateaus. The plateau of Anahuac, on which is situated the capital, is the largest and most important. The varying altitudes, as well as its situation, partly in the tropical and partly in the temperate zone, give to Mexico a diversity of climate and products. Its mineral wealth is proverbial. The extensive forests, both of the lowlands and of the mountain country, are most valuable. These contain woods for building, for cabinet making, dyewoods, and medicinal plants. In addition to its minerals and forest products, Mexico produces henequen, coffee, rubber, ixtle, corn, cotton, tobacco, vanilla, and sugar.

COAT OF ARMS OF MEXICO.

The constitution of the United Mexican States, adopted February 5, 1857, provides for a representative, federal form of Government, the various States of the Union being free to regulate their internal affairs. There are legislative, executive, and judicial branches. The National Congress is composed of the Senate and Chamber of Deputies, the former consisting of 56 members, 2 for each State and the Federal District, elected indirectly for a term of four years, one-half of the Senate being renewed every two years. The members of the Chamber of Deputies, of which there are 233, are also elected indirectly, but for a term of two years, at the rate of one Deputy for every 40,000 inhabitants or fraction exceeding 20,000. Suffrage is possessed by all citizens who are 21 years old. Congress meets twice per annum, from April 1 to May 31 and from September 16 to December 15. The first session may be extended for 30 days and the last for 15 days, at the discretion of Congress or the President. A committee consisting of 14 Senators and 15 Deputies represents Congress during recess and is consulted by the President on all matters affecting legislation. It may also convene Congress in extraordinary session.

The President and Vice President are chosen by electors for a term of six years, the President being assisted by a cabinet of eight secretaries. His salary is 50,000 pesos, equal to $25,000. The Provisional President and his Cabinet are as follows:

Provisional President, Sr. Lic. Francisco de la Barra.

Secretary of Foreign Relations, Sr. Lic. Bartolome Carvajal y Rojas (ad interim).

Secretary of the Interior, Sr. Lic. Alberto García Granados.

Secretary of Justice, Sr. Lic. Manuel Calero.

Secretary of Public Instruction and Fine Arts, Sr. Dr. Francisco Vásquez Gómez.

Secretary of Promotion (Fomento), Colonization, and Industry, Sr. Lic. Rafael Hernández.

Secretary of Communications and Public Works, Sr. Ing. Manuel Bonilla.

Secretary of Finance, Sr. Don Ernesto Madero.

Secretary of War and Marine, Sr. Gral. Eugenio Rascón.

The Cabinet officials are appointed by the President and are directly responsible to him for the proper administration of their respective departments.

PRESIDENT FRANCISCO DE LA BARRA.

The Department of Foreign Relations (Secretaría de Relaciones Exteriores) is charged with the conduct of all diplomatic and consular matters at home and abroad, the negotiation of treaties and conventions, the settlement of boundary disputes, and such other international matters as may arise from time to time. The Secretary of this department has custody of the grand seal of the Nation and is keeper of the national archives.

The Department of the Interior (Secretaría de Gobernación) has charge of the administration of the Federal District and the National Territories; the governors of these territories, too, come within the jurisdiction of this department. Under this branch comes also the regulation of the federal rural police, elections, immigration, public charities, sanitation, the National Printing Office, and the Official Gazette (Diario Oficial).

Under the control of the Department of Justice (Secretaría de Justicia) comes the national judiciary comprising a supreme court, three circuit courts, and 32 district courts, as well as the various courts of the States, Territories, and Federal District.

The Department of Public Instruction and Fine Arts (Secretaría de Instrucción Pública y Bellas Artes) has direct supervision over the educational institutions of the Federal District and the National Territories, and over the higher grades of instruction in the various States. Under its scope are such institutions as the Academy of Fine Arts, the Conservatory of Music and Declamation, the National Pathological Institute, and other scientific academies and societies. Public libraries, registration of copyrights, national museums, archæological exhibits also fall within the jurisdiction of this division.

One of the largest of the executive departments is that of Promotion (Secretaría de Fomento, Colonización é Industria), which is divided into five sections, devoted to the control, regulation, progress, and development of the natural resources of the Republic. The forests, mines, agricultural lands, water powers are each assigned to one of these divisions for due attention and exploitation. Under this department are established the Bureau of Weights and Measures, Bureau of Printing and Engraving, Patent Office and Commercial Trade-Marks, Registry of Deeds, Bureau of Statistics and Archives, and Publications.

The Department of Communications and Public Works (Secretaría de Comunicaciones y Obras Públicas) is primarily charged with the regulation of all railways, private as well as Government owned, street railways, telegraph and telephone systems, cables, wireless service, and with the improvement and development of highways, bridges, harbors, ports, and other means of communication and transportation. It also has charge of the various public buildings, and is empowered to maintain these, as well as to erect new edifices when necessary.

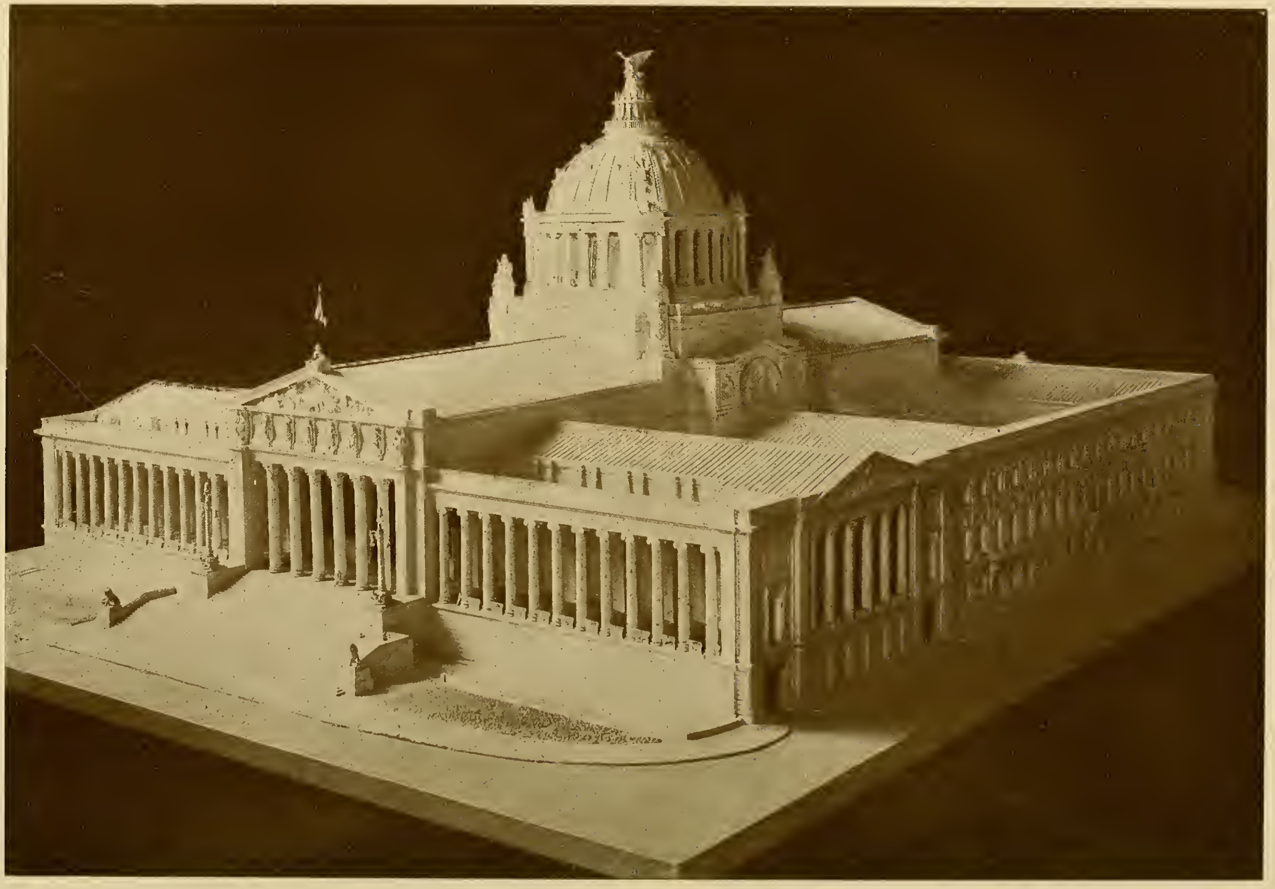
To the Department of Finance (Secretaría de Hacienda, Crédito Público y Comercio) devolves the duty of collecting all federal taxes, the administration of the customhouses, mints, and assay offices, the disbursing of public funds, compilation of commercial statistics, and such other fiscal matters connected with the administration of the Government.

The Department of War and Marine (Secretaría de Guerra y Marina) has charge of all matters pertaining to the national defense, as well as the supervision and maintenance of various naval and military schools and colleges.

A supreme court, three circuit courts, and lower courts comprise the national judiciary. The supreme court justices, 11 in number, are elected by indirect vote of the people for a term of 6 years.

The personnel of the regular army in 1909 numbered 3,221 officers and 26,745 privates. Enlistment in the service is voluntary, but is supplemented by conscription. The navy consists of about 15 vessels, which are used for purposes of instruction, patrol duty, and transport service.

Mexico is divided politically into 27 States, 3 Territories, and 1 Federal District. Governors of the States are elected in the same manner as the President of the Republic, as are also the legislatures and the judiciary of each State. The Territories are administered by governors appointed by the President, while the government of the Federal District, which includes the capital, Mexico City, is in the hands of three officials, likewise appointed by the President. The States and Territories are subdivided into municipalities, which elect their own administrative councils and mayors.



THE CAPITOL IN THE CITY OF MEXICO.

As part of the celebration, in the Republic of Mexico, of the centennial anniversary of their declaration of independence, the corner stone of the new federal capitol was laid, with elaborate ceremonies, September 23, 1910. Provision is made in the building for the accommodation of both Houses of Congress. When finished, the structure will add greatly to the artistic attractions of the city.

Notable progress has been made in the extension of the post and telegraph service in the Republic. There are now 2,856 post offices of all classes, 491 telegraph stations, with 23 telephone and 6 wireless-telegraph stations. The length of wires totals 74,254 kilometers, while an equally efficient cable system shows a total length of cable amounting to 770,576 meters.

MEXICO IN 1910.

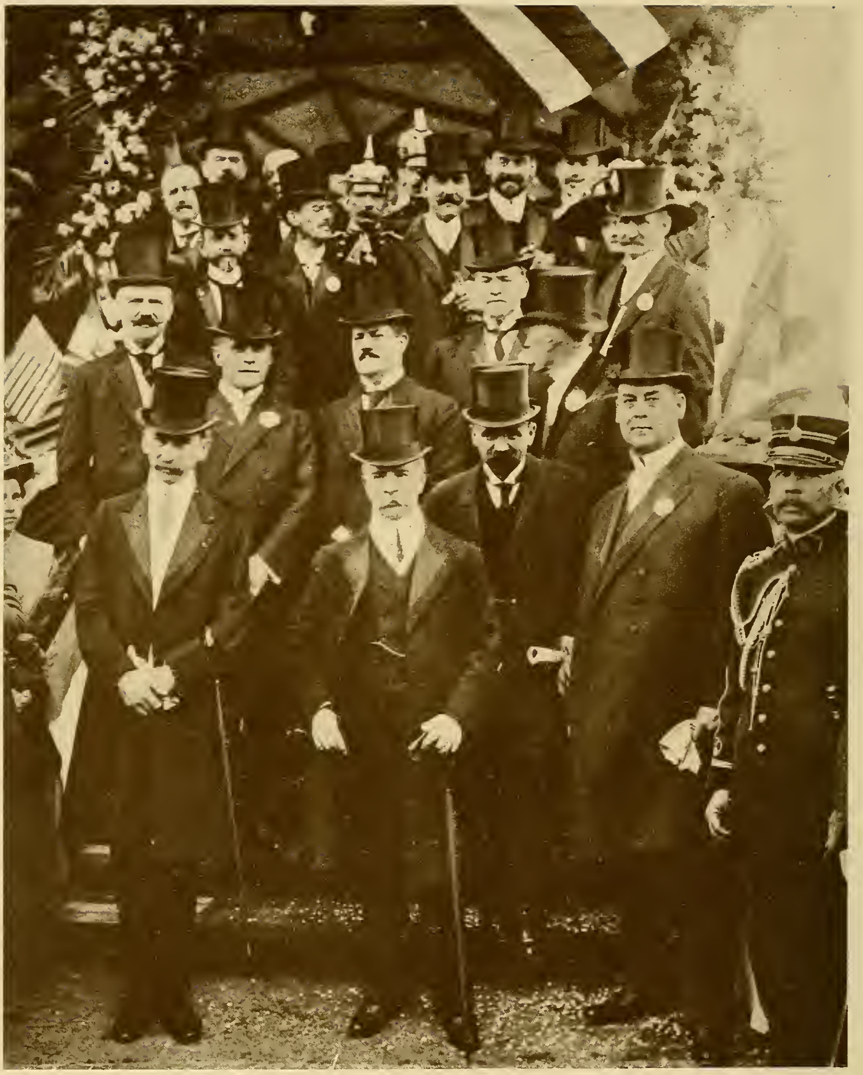
The opening of the year was for the Republic a matter of rejoicing on all sides. In the factors that add to a nation's prosperity every element was encouraging, and the country promised to round out its hundred years of independent existence with a record second to none other in Latin America. Agriculturally the situation, which even in 1909 had not been adverse, was better than in previous years, and the crops of the staples were increased.

Commercially Mexico, during the fiscal year ending June 30, 1910, made noteworthy gains over the same period ending June 30, 1909; taking the second six months' period of the calendar year ending December 1, 1910, with the first half of the year, the result on the figures of foreign commerce are equally pleasing, and the balance of trade for the calendar year was well in favor of the country, so that the creditable showing in national trade during the past six years was well preserved.

Financially the same results are deducible. Taking account of the fiscal year only, ending June 30, 1910, as compared with the same period ending in 1909, there was increase in both receipts and expenditures. There was likewise increased returns from taxes on foreign commerce, with a small but demonstrable decrease of cost in collecting the national revenues.

Mexico, as was the case with Argentina, Chile, and other Republics of Latin America, celebrated in 1910 the centenary of independence, dating the anniversary from September 15–16, 1810. The entire month of September had been given to the festivities, and many material monuments were dedicated at that time in commemoration of the event. The people in various ways took occasion to emphasize their progress, and each State, in fact, while establishing local celebrations, issued an historical résumé of its advance during the hundred years. That Mexico had therefore become solidified into a country recognizing its own nationality was one of the most worthy results of the generation of peace it has enjoyed.

On the opening of Congress, September 16, 1910, President Díaz felicitated the Republic upon its one hundredth anniversary; he declared that cordial relations were maintained with foreign Governments, and showed that the commercial and financial standing was



FOURTH OF JULY CELEBRATION IN MEXICO CITY—LEAVING GRANDSTAND AT CONCLUSION OF THE EXERCISES.

Standing to the right of President Francisco de la Barra, who is in the center, is the United States Ambassador, Henry L. Wilson; on the step, just back and to the left of the President, is Señor Don Francisco I. Madero; on his left, in front row, is James E. Long, chairman executive committee, Fourth of July celebration, 1911. Directly back of President de la Barra is Señor Don Ernesto Madero, Secretary of Hacienda; just in back and to the left of him is the United States Consul General, Arnold Shanklin; in back, on Mr. Shanklin's right, is Señor Don Rafael Hernandez, the Secretary of Fomento.

favorable. Many plans for reforms in the administration of the agricultural bureau had been accomplished, so that the resources of the country in that branch could be more rapidly and securely developed. The new mining law was working successfully. The retrospect of the century and of the year was satisfactory, and the hope for the future was encouraging.

There are over 1,000,000 pupils in attendance at the public and private schools of Mexico. The primary schools aggregate 12,000 in number; there are also many prosperous private schools where very satisfactory instruction is given, great influence being laid upon the teaching of the English language.

On December 1, 1910, Gen. Díaz again took the oath of office for another term as President of the Republic. At this time, however, mutterings of the impending disturbance had already been heard, and political conditions were less calm than they had been at the opening of Congress in September. A revolution was threatening, especially in the northwest, against the established authority, and uneasiness was felt, both in Mexico and in the outside world, as to what might be the outcome of this unrest. Thus the close of 1910 found the country, although but little affected in commercial, financial, and industrial conditions, less secure than at the beginning of the year.

FINANCE.

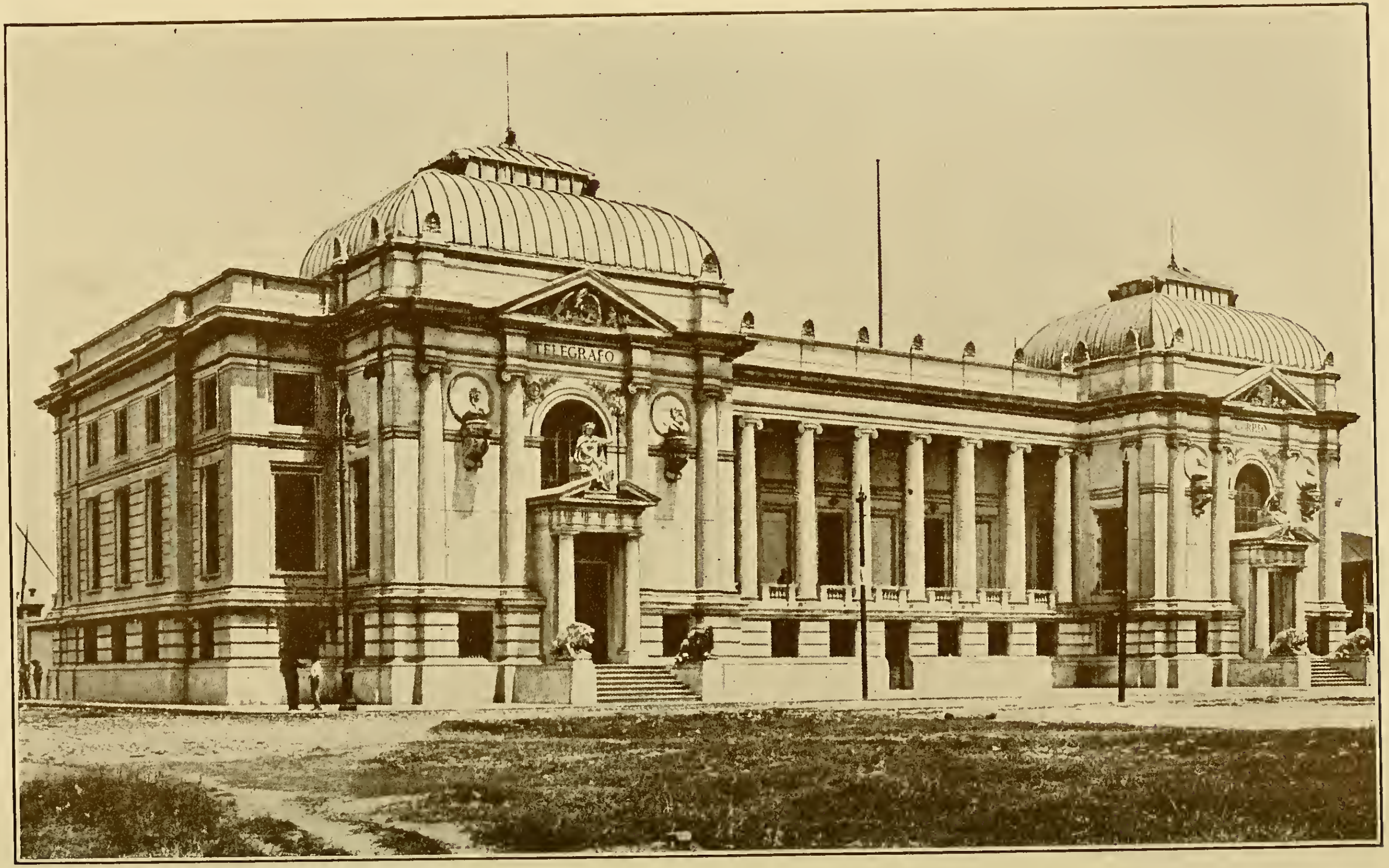
The revenues for the fiscal year ending June 30, 1910, were $53,164,242.55 United States gold and the expenditures $47,514,325.28. The receipts for the preceding year were $49,387,755.39 and the disbursements $46,483,696. 66. There was, therefore, an increase in the receipts and expenditures during the fiscal year 1910 as compared with 1909 of $3,776,487.16 and $1,030,628.62, respectively.

The receipts for the fiscal year 1909–10, broadly classified into four headings, were as follows:

Taxes on foreign commerce	$24, 845, 178. 61
Interior taxes applicable to the whole of the Republic	16, 708, 208. 69
Interior taxes applicable to the Federal District and Territories only	5, 842, 617. 17
Miscellaneous, public service, national property, etc	5, 768, 238. 08
Total	53, 164, 242. 55

The tax on foreign commerce during the fiscal year 1909–10 consisted principally of import duties to the amount of $23, 283, 337. 10, an increase of $4, 313, 476. 67 over the amount collected during the preceding year. There was an increase in general interior taxes of $721,828.20 in the fiscal year 1909–10 as compared with the preceding year, and a decrease in the internal taxes payable in the Federal District and Territories and in the miscellaneous receipts of $98, 026. 39, and $1, 408,922 81, respectively.

The total outlay by the Mexican Government in collecting the revenues of the Republic for the fiscal year 1909–10 was $3,236,743.43. This includes every expense—official salaries, mint and assay-office expenses, etc. This sum represents 6.59 per cent of the revenue. For the preceding fiscal year the cost of collection amounted to 6.93 per cent. There was, therefore, a reduction of 0.34 per cent for the year.



FEDERAL POST AND TELEGRAPH OFFICE BUILDING, VERACRUZ, MEXICO.

The expenditures for the fiscal year 1909-10 were divided as follows:

Legislative	$697, 734. 17
Executive	121, 359. 14
Judiciary	294, 415. 96
Department of Foreign Relations	1, 073, 976. 31
Department of Government (Interior)	6, 113, 131. 05
Department of Justice	773, 566. 95
Department of Public Instruction and Fine Arts	3, 302, 476. 24
Department of Fomento (Encouragement), Colonization, and Industry	1, 327, 918. 74
Department of Communication and Public Works	6, 669, 730. 37
Department of Treasury, Public Credit, and Commerce:	
Administrative services	4, 424, 304. 76
Public debt	13, 125, 633. 66
Department of War and Marine	9, 590, 077. 93
Total	47, 514, 325. 28

Under the Department of Government the expenditures included in the statement above were as follows:

Ministerial and general	$501, 249. 48
Public health	257, 695. 84
Rural police	894, 536. 48
Charities of the Federal District	627, 537. 18
Political and municipal administration of the Federal District	3, 642, 268. 47
Political and municipal administration of the Federal Territories	189, 843. 60
Total	6, 113, 131. 05

The expenditures on account of the post office, under the Department of Communications and Public Works during the fiscal year 1909-10, and included in the foregoing table, were:

Sundry services	$2, 666, 854. 10
Post office	2, 603, 589. 77
Telegraph lines	1, 399, 286. 50
Total	6, 669, 730. 37

The expenditures shown in the table charged to the Department of War and Marine were principally expenditures on account of the army, viz, $8,716,300.77. The expenditures on acount of the navy amounted to only $873,777.16.

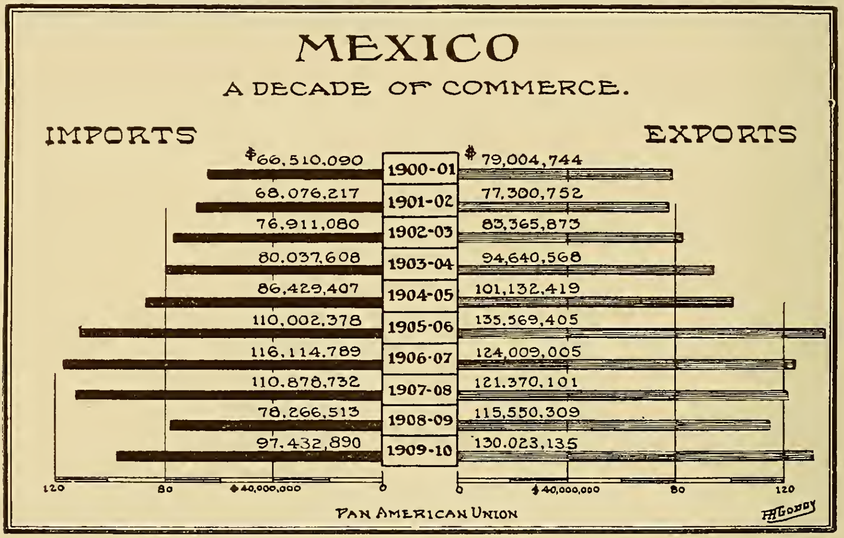
According to the report presented by the under Secretary of Finance, Lic. Roberto Nuñez, to the Mexican Congress on December 14, 1910, the public debt of Mexico for the fiscal years 1908-9 and 1909-10 (reduced to United States currency) was as follows:

	1908-9	1909-10
Debt payable in foreign currency, face value of bonds in circulation	$150, 475, 498. 10	$148, 705, 541. 76
Uncollected coupons	1, 563, 781. 13	1, 556, 956. 25
Total	152, 039, 279. 23	150, 262, 498. 01
Debt payable in Mexican currency, face value of bonds in circulation	68, 924, 567. 50	68, 390, 880. 00
Uncollected coupons	519, 986. 68	534, 186. 85
Total	69, 444, 554. 18	68, 925, 066. 85
Floating debt, uncollected balances of past budgets	184, 339. 55	136, 699. 37
Grand total	221, 668, 172. 96	219, 324, 264. 23

The redemptions in public-debt securities during the year were:

Debt payable in foreign currency	$1,769,956.34
Debt payable in Mexican currency	533,687.50
Floating debt (noninterest-bearing)	47,640.18
Total	2,351,284.02

According to the report of Sr. Nuñez the available cash holdings of the Treasury Department on June 30, 1910, were $37,042,857.42. On June 30 of the preceding year the holdings were $38,011,255.52, so that there was a decrease during the year in available cash of $968,398.10. The cash holdings of the Government on June 30, 1910, were deposited in the General Treasury, in the Exchange and Currency Commission, and other Government offices in Mexico to the amount of $18,015,398.67. A little over half of this was in the fund for the regulation of the currency. The sum of $18,651,020.50 was deposited in various banks, and $376,438.24 were in remittances en route. Of the bank deposits the principal were $7,883,093.70 in the Bank of England, $6,999,381.81 in the National Bank of Mexico, $1,650,657.48 with Speyer & Co., New York, $1,472,824.72 with Ladenburg, Thalmann & Co., New York, and $559,161.27 with the Dresdner Bank of London.



During the year the deposits in the National Bank of Mexico were reduced over $5,000,000, and increased in the Bank of England over $2,500,000, with Speyer & Co., nearly $1,000,000, and with Ladenburg, Thalmann & Co. over $250,000.

COMMERCE.

The total foreign trade for the fiscal year ending June 30, 1910, amounted to $227-456,025.57, United States gold, an increase over the preceding year of $33,639,202.82, or 17.3 per cent. The value of the imports was $97,432,890.68, compared with $78,266-513.49 for the preceding year, a gain of $19,166,377.19. The value of the exports was $130,023,134.89, as against $115,550,309.26 for the year before, a gain of $14,472,825.63. The balance of trade in favor of the Republic for the year 1909–10 was $32,584,244.21.

For the first six months of the fiscal year 1910–11 the imports amounted to $52,975-113.60 and the exports to $69,925,804.37; total, $122,900,917.97, an increase over the corresponding six months of 1908–09 of $18,434,892.64. From these figures there was every indication of a large increase in Mexican foreign trade for the fiscal year 1910–11 had not the political disturbances of recent date occurred.

IMPORTS.

The imports for the fiscal year 1909–10 and for the two preceding years, by world divisions and by the principal countries thereof, were as follows:

WORLD DIVISIONS.

	1907–8	1908–9	1909–10
North America	$59,411,866	$45,998,989	$57,569,929
Europe	49,580,859	30,816,038	37,161,975
Asia	1,112,254	909,039	1,366,194
South America	348,289	305,249	1,059,235
West Indies	71,352	81,990	120,210
Central America	59,430	15,430	58,079
Oceania	181,879	100,714	52,925
Africa	112,803	39,064	44,343
Total	110,878,732	78,266,513	97,432,890

PRINCIPAL COUNTRIES.

	1907–8	1908–9	1909–10
United States	$59,000,993	$45,280,775	$56,421,551
United Kingdom	16,372,486	9,897,204	11,125,808
Germany	14,160,386	8,568,765	10,134,038
France	9,890,104	6,178,696	8,715,422
Spain	3,761,159	2,588,671	2,609,201
Belgium	1,621,374	952,442	1,241,466
Canada	410,872	718,214	1,148,377
Italy	960,835	900,470	967,227
Argentina	174,810	16,124	847,527
India	511,345	491,598	766,181
Austria-Hungary	800,144	609,497	706,666
Switzerland	705,652	419,763	573,327
Holland	273,507	220,977	272,675
Norway	175,887	195.216	248,116
China	103,704	95,628	240,672
Japan	468,118	291,154	229,578

The gain in imports from the United States was $11,140,776, or 24.6 per cent; the United Kingdom, $1,228,604, or 12.4 per cent; Germany, $1,565,273, or 18.1 per cent; France, $2,536,726, or 41 per cent; Spain, $20,530, or .8 per cent; Belgium, $289,024, or 27.5 per cent; Canada, $430,163, or 59.9 per cent; Italy, 66,757, or 7.4 per cent; India, $274,583, or 55.8 per cent. The gains from the remaining countries were considerable both in amount and in per cent, except from Japan, where there was a loss of $66,576, or 21.2 per cent, and Argentina, where there was an abnormal gain amounting to 5,151 per cent.

The imports for the last three years under 11 major classifications were as follows:

	1907–8	1908–9	1909–10
Mineral substances	$34,825,629	$22,294,220	$27,929,814
Vegetable substances	15,334,138	14,683,290	21,355,726
Machinery and apparatus	14,324,012	10,060,756	10,470,848
Textiles and manufactures thereof	15,319,615	7,952,336	10,110,462
Animal substances	8,632,732	6,284,203	7,506,442
Chemical and pharmaceutical products	5,174,526	4,827,860	5,619,186
Wines, spirits, etc	3,581,946	2,783,193	3,276,408
Cars, carriages, wagons, etc	3,705,363	2,156,646	2,877,097
Paper and manufactures	3,067,019	2,324,231	2,533,450
Arms and explosives	1,825,279	1,266,050	1,450,892
Miscellaneous	5,088,473	3,633,728	4,312,565
Total	110,878,732	78,266,513	97,432,890

IMPORTS BY CUSTOMHOUSES.

The imports for the last three years by ports of entry were as follows:

	1907–8	1908–9	1909–10
GULF PORTS.			
Campeche	$189,832.97	$123,386.84	$164,834.74
Coatzacoalcos	1,881,388.49	1,927,229.78	1,545,729.15
Chetmul	163,860.38	179,049.20	219,120.06
Frontera	631,074.16	440,350.04	505,287.20
Isla del Carmen	132,629.15	57,484.17	101,802.43
La Ascension	35,168.96	37,288.80	50,740.49
Progreso	3,475,131.90	2,174,531.72	2,760,526.54
Tampico	21,776,458.09	13,582,226.39	18,477,784.99
Tuxpam	22,688.77	38,409.79	28,249.67
Vera Cruz	40,021,036.28	27,788,212.90	34,676,085.45
Total of Gulf ports	68,329,269.15	46,348,169.63	58,530,160.72
PACIFIC PORTS.			
Acapulco	545,653.55	287,865.43	267,963.27
Altata	89,156.03	42,898.85	25,225.81
Bahia de la Magdalena	114.05	1,512.16	1,297.99
Ensenada	165,716.10	117,836.54	158,856.46
Guaymas	1,707,809.16	1,768,310.35	2,408,059.60
La Paz	137,865.15	80,374.46	106,129.80
Manzanillo	462,002.56	879,817.54	1,538,338.84
Mazatlan	2,093,192.21	1,844,601.23	1,767,912.28
Puerto Angel	2,913.30	1,945.92	5,629.48
Salina Cruz	434,695.02	117,971.22	397,868.11
San Blas	155,052.53	111,917.55	136,039.59
Santa Rosalia	717,769.95	979,752.26	1,006,678.95
Topolobampo	76,948.94	96,568.06	77,902.85
Total of Pacific ports	6,588,888.55	6,331,471.57	7,897,903.03
NORTHERN FRONTIER PORTS.			
Agua Prieta	1,059,995.50	445,913.26	521,595.00
Boquillas	1,297.63	1,527.39	20,327.98
Camargo	15,955.86	2,429.32	4,830.65
Ciudad Juarez	10,920,184.24	5,618,250.44	7,496,654.90
Ciudad Porfirio Diaz	6,498,814.98	3,783,577.69	4,654,795.69
Guerrero	22,145.03	4,593.86	4,464.22
La Morita	986,410.69	1,449,021.38	1,539,975.24
Laredo	13,217,384.02	10,792,622.56	13,415,335.44
Las Vacas	16,283.69	20,961.84	29,004.66
Los Algodones	....	....	1,259.40
Matamoros	142,423.30	82,035.37	131,808.05
Mexicali	325,464.28	194,070.63	220,825.95
Mier	7,748.81	7,537.47	16,487.04
Nogales	2,507,351.77	3,064,637.03	2,580,230.70
Tijuana	50,403.74	30,004.48	271,487.95
Total of northern frontier ports	35,771,863.54	25,497,182.72	30,909,082.97
SOUTHERN FRONTIER PORTS.			
Soconusco	186,933.61	87,807.92	85,402.62
Zapaluta	1,777.25	1,881.65	10,341.34
Total of southern frontier ports	188,710.86	89,689.57	95,743.96
Grand total	110,878,732.10	78,266,513.49	97,432,890.68

For the year 1909-10, under the general heading "Mineral substances," are included:

Gold, silver, and platinum	$1,629,037
Copper and alloys	2,680,517
Tin, lead, and zinc	530,132
Iron and steel	13,815,027
Other metals	71,395
Stone and earthy products	9,203,706
Total	27,929,814

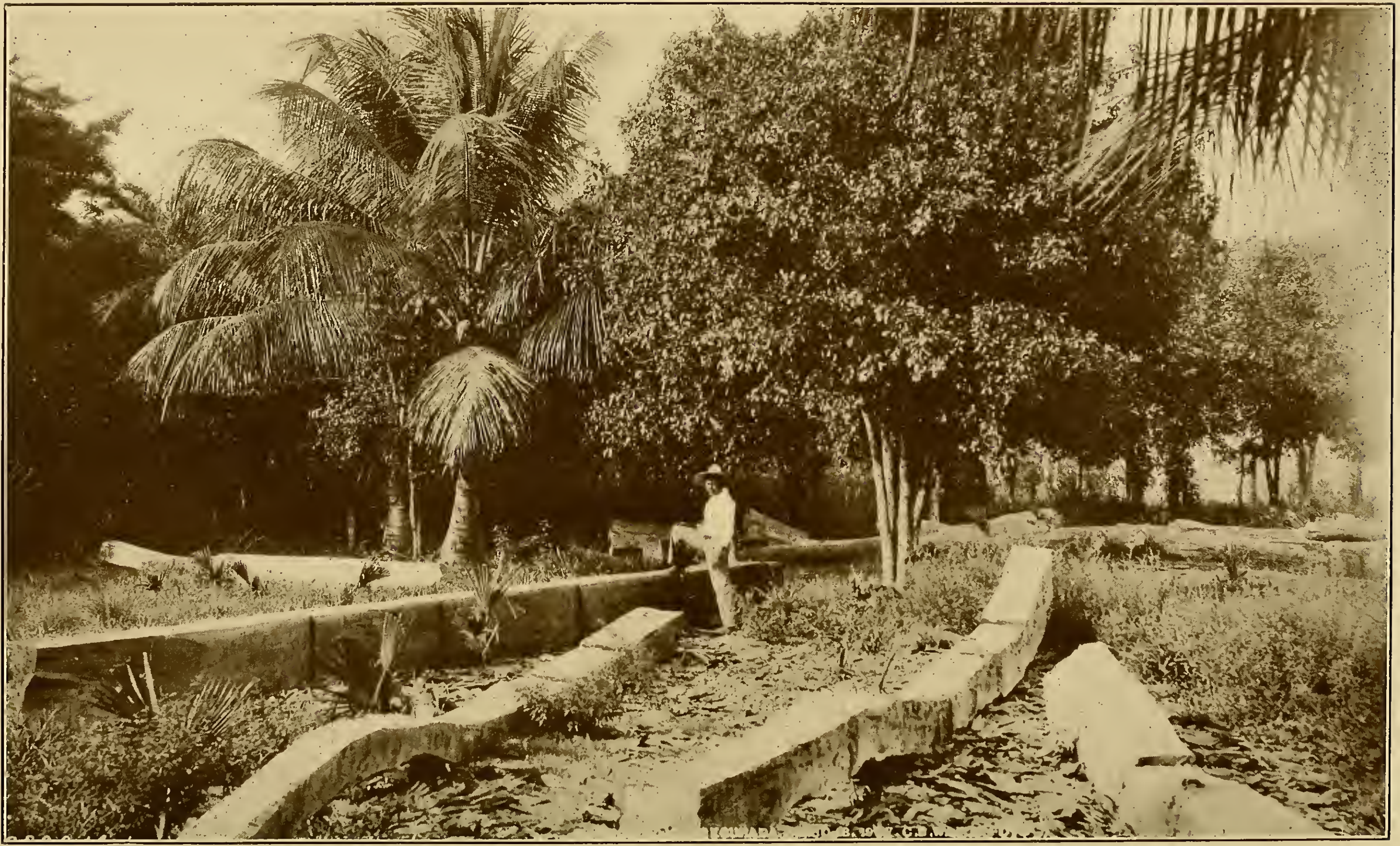
The principal items under the subhead "Gold, silver, and platinum" were: Jewelry, real, including that set with precious stones and pearls, $332,226, of which $170,030 was from Germany, $92,892 from France, $51,862 from the United States, and $12,548 from the United Kingdom; and foreign gold and silver coin, $1,268,463, of which $1,032,605 was from the United States and $226,038 from the United Kingdom.

The principal items under the subhead "Copper and alloys" were: In ingots, ore untreated, and matte, $1,026,959, all from the United States; in plates, sheets, and piping, $110,630, of which $52,062 was from the United States, $33,821 from Germany, and $23,755 from the United Kingdom; wire, plain and covered, $324,206, of which $254,842 was from the United States, $50,061 from Germany, $11,564 from France, and $6,009 from the United Kingdom; manufactures not otherwise specified, $842,781, of which $449,571 was from the United States, $197,661 from Germany, $109,591 from France, and $51,312 from the United Kingdom; cable, $238,103, of which $153,181 was from the United States, $50,986 from Germany, $27,834 from the United Kingdom, and $2,337 from Sweden.

The principal items under the subhead "Tin, lead, and zinc" were: Bar tin, $117,352, of which $72,594 was from the United States, $30,336 from the United Kingdom, $8,157 from Japan, and $4,472 from Germany; zinc in bars, etc., $47,203, of which $44,967 was from the United States; manufactures of tin, lead, and zinc or alloys, not specified, $100,080, of which $40,334 was from the United States, $32,760 from Germany, $18,104 from France, $3,001 from the United Kingdom; and sheet zinc, $222,918, of which $157,877 was from Belgium, $37,020 from Germany, $13,061 from France, $12,725 from the United States, and $1,901 from the United Kingdom.

The principal items under the subhead "Iron and steel" were: Steel in bars, rods, etc., $255,443, of which $152,009 was from the United States, $50,877 from the United Kingdom, $23,610 from Germany, and $16,842 from Austria-Hungary; wire, $274,690, of which $170,432 was from the United States, $83,633 from Germany, and $13,343 from the United Kingdom; fence wire, $660,685, of which $593,903 was from the United States, $51,549 from Germany, and $7,381 from Belgium; plows and spare parts, hoes, and agricultural hardware, $544,971, of which $448,137 was from the United States, $46,411 from the United Kingdom, and $45,772 from Germany; steel cable, $176,388, of which $143,312 was from the United States, and $26,758 from the United Kingdom; iron piping, $3,183,102, of which $1,838,001 was from the United States, $711,548 from the United Kingdom, $540,726 from France, $64,732 from Germany, and $25,139 from Belgium; iron bars, rods, etc., $143,414, of which $57,403 was from the United States, $41,295 from the United Kingdom, $30,162 from Belgium; and $10,476 from Germany; iron and steel in sheets not specified, fluted, and for roofing, $856,262, of which $685,645 was from the United States, $128,567 from the United Kingdom, and $30,062 from Germany; tin plate, $281,401, of which $218,924 was from the United Kingdom, and $60,067 from the United States; steel rails, switch rails, frogs, ties, etc., $2,823,360, of which $2,170,040 was from the United States, $390,217 from the United Kingdom, $201,742 from Germany, and $50,700 from Belgium; railroad spikes, nuts, bolts, and fishplates, $832,055, of which $666,367 was from the United States, and $147,675 from the United Kingdom; structural steel for buildings, $778,874, of which $502,225 was from the United States, $113,059 from Germany, $98,848 from the United Kingdom, and $52,565 from Belgium; tinned nickeled, coppered, or galvanized ware, $1,995,959, of which $1,309,330 was from the United States, $369,490 from Germany, $118,164 from the United Kingdom, and $83,048 from France, and $42,471 from Italy; iron enameled ware not specified, $241,270, of which $144,968 was from Germany, and $88,461 from the United States; nails, bolts, and nuts not specified, $488,543, of which $374,150 was from the United States, $36,371 from Germany, $33,486 from the United Kingdom, and $32,061 from France; stoves, cooking and heating, $92,942, of which $88,915 was from the United States.

The principal items under the subhead "Stone and earthy products" were: Clay, sand, refractory earth and tripoli, $309,964, of which $205,606 was from the United States, $48,945 from the United Kingdom, and $46,706 from Belgium; lime, hydraulic



MAHOGANY LOGS PREPARED FOR MARKET.

Mexico is particularly rich in forest resources. The extensive forests of the hot country in the States along the coasts contain not only mahogany but also a great variety of other cabinet woods.

lime, cement, and carbonate of lime, $561,238, of which $165,687 was from the United Kingdom, $164,777 from Germany, $144,144 from the United States, and $67,513 from Belgium; coal, $2,498,914, of which $1,525,944 was from the United States, $705,131 from the United Kingdom, and $206,051 from Canada; crude mineral oils, $1,396,415, of which $1,396,396 was from the United States; refined mineral oils, benzine, mineral wax and paraffin, $932,548, of which $591,142 was from the United States, $162,174 from Austria-Hungary, $98,086 from the United Kingdom, and $76,236 from Germany; coke, $1,327,429, of which $752,134 was from the United States and $557,034 from Germany; manufactures of marble and alabaster, $154,848, of which $140,882 was from Italy, and $6,812 from the United States; bricks, tiles, and terra-cotta pipe, $113,929, of which $81,370 was from the United States, $25,340 from France, and $5,318 from Belgium; glass bottles and demijohns, $344,673, of which $187,820 was from the United States, $122,920 from Germany, and $14,829 from the United Kingdom; stone and china ware not specified, $280,975, of which $108,844 was from Germany, $67,592 from the United Kingdom, $43,568 from the United States, and $25,552 from France; glassware not specified, $379,768, of which $223,552 was from the United States, $82,274 from Germany, $31,825 from France, and $25,547 from Austria-Hungary; glass, plain, $195,744, of which $99,996 was from Belgium, $59,840 from the United States, $13,571 from the United Kingdom, and $6,438 from France.

For the year 1909–10, under the general heading "Vegetable substances," are included:

Textile fibers	$2, 494, 557
Fruits and grains	10, 007, 454
Miscellaneous vegetable substances	793, 053
Miscellaneous products	3, 012, 236
Lumber	2, 750, 818
Manufactures	2, 297, 608
Total	21, 355, 726

The principal items under the subhead "Textile fibers" were: Ginned cotton, $1,990,438, of which $1,973,127 was from the United States and $17,310 from Egypt; jute, manila hemp, ixtle, etc., $399,371, of which $224,065 was from India, $123,170 from the United Kingdom, and $50,345 from the United States.

The principal items under the subhead "Fruits and Grains" were: Caraway and anise seed, shelled almonds, cacao, and pepper, $570,496, of which $221,478 was from India, $153,841 from Spain, $39,942 from Venezuela, $38,267 from the United States, $37,397 from the Dominican Republic, $20,476 from Colombia, $17,080 from Ecuador, and $17,038 from the United Kingdom; rice, $199,080, of which $117,294 was from India, $28,789 from the United States, $20,653 from China, and $14,735 from Germany; rolled oats and barley, $167,181, of which $162,703 was from the United States; cinnamon, cassia, and vanilla, $150,254, of which $115,797 was from India and $19,026 from the United States; barley malt, $99,340, of which $49,063 was from the United States and $41,644 from Austria-Hungary; dried fruits not specified, $215,682, of which $93,325 was from the United States, $57,874 from Spain, and $39,640 from France; fresh fruits, vegetables, and tubers, not specified, $237,131, of which $204,745 was from the United States and $17,976 from Spain; the same, preserved, $198,773, of which $95,519 was from the United States, $44,120 from France, $29,393 from Spain, and $12,582 from the United Kingdom; Indian corn, $2,756,027, of which $2,731,370 was from the United States, $14,113 from Germany, and $10,152 from Argentina; wheat and other grain not specified, $5,141,312, of which $3,356,983 was from the United States, $831,350 from Argentina, and $804,404 from Canada; live plants, garden and field seeds, $114,370, of which $75,325 was from the United States, $14,987 from France, and $7,637 from Germany.

Under the subhead "Miscellaneous vegetable substances" the principal items were: Firewood and straw, $201,028, of which $197,100 was from the United States; hops, $126,609, of which $68,918 was from Germany, $48,246 from Austria-Hungary, and $9,293 from the United States; leaf tobacco, $229,034, of which $182,529 was from the United States, $35,928 from Sumatra, $3,292 from India, $2,134 from Turkey, and $1,951 from Cuba.

Under the subhead "Miscellaneous products" the principal items were: Olive oil, $231,598, of which $136,927 was from Spain, $84,995 from France, and $5,041 from the United States; sugar, $97,114, of which $89,303 was from the United States; wheat and other flour not specified, $311,780, of which $264,726 was from the United States; opium, $150,252, of which $128,508 was from China; cotton seed, coco, linseed, and corn oil, $1,653,522, of which $1,536,889 was from the United States, $73,437 from the United Kingdom, $14,500 from Holland, and $10,296 from Germany.

The principal countries sending lumber ($2,750,818) were: United States, $2,656,027; Japan, $40,500; Canada, $37,635; and the United Kingdom, $11,009.

The principal items under "Manufactures" were: Manufactures of wood not specified, $431,564, of which $286,388 was from the United States, $91,027 from Germany, $37,657 from France, $27,725 from Italy, $14,867 from the United Kingdom, and $9,203 from Spain; empty barrels and kegs and empty cases, $506,288, of which $94,211 were barrels and kegs, and $412,077 were packing cases, nearly all from the United States. There were five classes of furniture, amounting to $690,062, of which the imports from the United States were $509,252, from Austria-Hungary $87,585, from France $58,693, and from Germany $31,228.

Under the general heading "Machines and apparatus" are included: Fire extinguishers, $12,715, three-fourths from the United States; manifolding machines, $6,744, practically all from the United States; bulbs and other parts for incandescent lighting, $144,177, of which $95,262 was from the United States and $38,501 from Germany; scientific instruments and apparatus, $205,057, of which $99,619 was from the United States, $46,928 from Germany, and $41,165 from France; mechanical toys, $11,878, of which $9,798 was from Germany; arc electric lamps, $26,781, of which $16,171 was from the United States and $10,235 from Germany; incandescent electric lamps, $353,452, of which $180,022 was from the United States, and $137,398 from Germany; agricultural, industrial, mining, and other machinery not specified, and spare parts, $9,568,077, of which $6,675,959 was from the United States, $1,445,584 from the United Kingdom, $1,057,790 from Germany, $185,585 from France, and $79,458 from Switzerland; watches, clocks, and works for same, $143,012, of which $44,861 was from Germany, $44,791 from the United States, $15,545 from Switzerland, and $12,698 from France.

Under the general heading "textiles and manufactures thereof" are included:

Cotton	$5, 412, 550
Linen, hemp, and like fibers	606, 147
Wool	2, 223, 252
Silk	1, 137, 840
Silk mixed with other fibers	622, 309
Imitation silk	108, 364
Total	10, 110, 462

The principal items under the subhead "Cotton" are: Thread in balls or skeins, $197,183, of which $148,596 was from the United Kingdom, and $36,745 from Germany; spool cotton, $875,610, of which $796,749 was from the United Kingdom, $32,594 from Germany, $28,032 from Belgium, and $17,042 from the United States; cotton lace, $608,981, of which $363,939 was from the United Kingdom, $133,012 from Germany, and $82,103 from France; handkerchiefs, $151,549, of which $134,006 was from the United Kingdom, and $7,295 from France; cotton cloth, white, plain weave, $529,656, of which

$397,882 was from the United Kingdom, $80,352 from the United States, $32,261 from France, and $10,797 from Germany; cotton cloth, white or dyed, other weave, $1,042,106, of which $474,151 was from the United Kingdom, $183,783 from the United States, $130,854 from Germany, $86,733 from Spain, $76,580 from France, and $44,253 from Italy; cotton prints, $493,165, of which $323,693 was from the United Kingdom, $47,628 from the United States, $38,934 from Spain, and $34,962 from Germany; hosiery, $273,221, of which $184,835 was from Germany, $44,913 from France, $21,024 from Spain, and $17,800 from the United States; men's shirts and underclothing, $107,670, of which $88,607 was from the United States; knit underclothing not specified, $108,875; ruffling, fringes, braids, passamentarie, etc., $137,701, of which $108,971 was from Germany, $13,015 from France, and $7,916 from the United States; ready-made clothing not specified, $129,785, of which $46,639 was from the United States, $40,208 from France, $22,191 from Germany, and $13,121 from the United Kingdom; cotton braids and embroideries, $166,846, of which $94,895 was from Switzerland, $27,514 from Germany, $13,787 from France, and $10,004 from the United Kingdom.

The principal items under the subhead "Linen, hemp, and like fibers" were: Yarn, $63,802, of which $60,839 was from the United Kingdom; thread, $125,655, of which $74,411 was from Germany, $12,627 from Austria-Hungary, $11,900 from the United Kingdom, and $16,526 from Italy; cloth, $251,544, of which $143,593 was from the United Kingdom, $87,377 from France, and $30,510 from Germany.

The principal items under the subhead "Wool" were: Cloth of weight under 150 grams per square meter, $739,326, of which $465,088 was from France, $159,659 from Germany, and $103,236 from the United Kingdom; of weight from 150 to 450 grams, $713,667, of which $422,490 was from the United Kingdom, $105,556 from France, $95,361 from Germany, and $55,024 from Belgium; of weight over 450 grams, $116,370, of which $72,908 was from the United Kingdom, and $21,106 from France; carpets and rugs on canvas background, $118,817, of which $63,483 was from the United Kingdom, and $19,677 from the United States; knit goods not specified, $104,942, of which $70,442 was from Germany and $19,883 from France; ready-made clothing, $276,034, of which $137,495 was from the United States, $90,837 from France, and $37,066 from Germany.

The principal items under the subhead "Silk" were: Silk cloth, $372,275, of which $176,737 was from France, $86,210 from Japan, $43,066 from Switzerland, and $30,322 from Germany; knit or otherwise woven, $563,294, of which $258,566 was from France, $120,277 from Germany, and $94,555 from Switzerland; ready-made articles, $106,714, of which $69,164 was from France, and $22,183 from the United States.

Under the subhead "Silk mixed with other fibers" the principal articles were: Cloth, $367,565, of which $240,785 was from France, $50,243 from Germany, $24,824 from the United Kingdom, and $17,101 from the United States; articles not specified, $146,083, of which $62,984 was from France and $46,109 from Germany.

Under the general heading "Animal substances" are included:

Live animals	$693, 877
Meats, wool, etc	699, 696
Animal products	3, 276, 562
Manufactures	2, 836, 307
Total	7, 506, 442

Of live animals, $656,265 came from the United States, $21,483 from Spain, and $6,832 from British Honduras.

Under the subhead "Meats, etc." the principal items were: Meat, fish, shellfish, dried, salted, and smoked, $170,843, of which $132,003 was from the United States and $24,273 from Norway; animal fats not specified, $119,973, of which $109,284 was from the United States; carded wool, $183,719, of which $136,400 was from France and $331,191 from the United Kingdom.

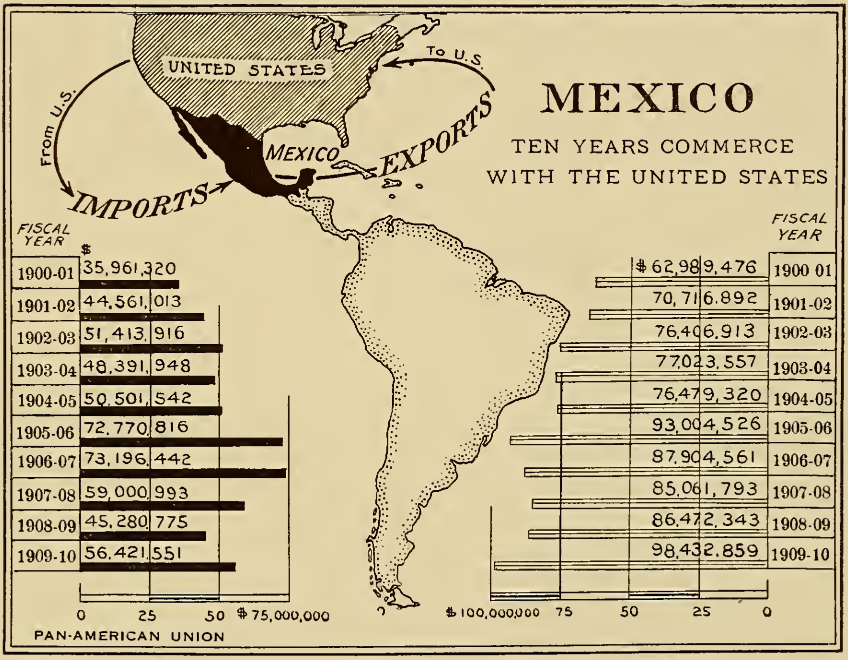
Under the subhead "Animal products" the principal items were: Preserved-food products, $1,116,229, of which the United States contributed $544,141, Spain $230,675, France $107,517, Portugal $61,815, Germany $53,168, and Switzerland $45,211; fresh eggs, $107,858, of which practically all was from the United States; lard, $1,047,263, of which all except $5 was from the United States; butter, $169,892, of which $127,610 was from the United States and $25,869 from Denmark; cheese, $275,583, of which $130,671 was from the Netherlands, $90,980 from the United States, and $24,023 from Switzerland; stearin, $217,318, of which $166,268 was from Belgium, $32,104 from the United States, and $20,134 from the Netherlands; articles of leather not specified, $215,141, of which the United States contributed $89,798, Germany $47,314, France $32,438, and the United Kingdom $25,161; leather belts and cables, $183,288, of which $120,049 was from the United States and $47,584 from the United Kingdom; calf, patent leather, kid, and other skins, dressed, $480,103, of which $212,705 was from the United States, $204,292 from Germany, and $48,882 from France; boots and shoes, $1,603,927, of which $1,476,901 was from the United States and $94,505 from Spain.

Under the general heading "Chemical and pharmaceutical products" the principal items were: Acetate of alumina, ammonia, lime, copper, etc., $80,199, of which $44,429 was from Germany, $15,594, from the United States, and $12,054 from the United Kingdom; acids of all kinds, $186,978, of which $99,575 was from the United States, $49,560 from Germany, $29,125 from the United Kingdom, and $11,559 from France. (Included under acids are arsenious acids, $18,503, more than one-half from the United States; sulphuric acid, $55,218, of which $31,765 was from the United States and $23,213 from the United Kingdom; hydrochloric and sulphurous acids, $40,525, of which $30,704 was from the United States and $8,250 from Germany; acetic, boric, citric, chromic, nitric, oxalic, piric, and tartaric acids, $74,347, of which $33,927 was from Germany, $24,663 from the United States, $7,333 from France, and $4,322 from the United Kingdom); absorbent cotton and gauze, $86,681, of which $82,234 was from the United States; varnish and shoe blacking, $202,850, of which $164,713 was from the United States and $19,311 from Germany; calcium carbide, $76,333, of which $65,578 was from the United States; alkaline cyanid, $1,368,360, of which $660,453 was from the United States, $378,425 from Germany, and $300,637 from the United Kingdom; paints in powder or crystals, $572,977, of which $391,076 was from Germany, $47,820 from the United States, $46,693 from Belgium, $33,974 from France, and $26,017 from the United Kingdom; prepared paints, $283,719, of which $193,604 was from the United States, $55,126 from the United Kingdom, and $22,657 from Germany; drugs and medicines not specified, $893,357, of which $406,492 was from the United States, $310,529 from France, $102,008 from Germany, and $25,203 from the United Kingdom; salts and oxides not specified, $95,349, of which $44,704 was from Germany, $17,576 from the United States, and $13,649 from France; nitrate of soda, $195,346, of which $89,253 was from the United States, $71,211 from Chile, and $32,472 from Germany; caustic soda and potash, $402,971, of which $263,438 was from the United Kingdom, $115,667 from the United States, and $23,734 from Germany; sulphate of alumina, magnesia, potash, and soda, $85,777, of which $45,778 was from the United Kingdom, $23,558 from Germany, and $13,084 from the United States; medicinal wines and elixirs, $165,179, of which $86,763 was from France, $40,252 from the United States, and $33,696 from Spain.

Under the general heading "Wines, spirits, etc.," the principal items were: Brandy, bottled, $988,633, of which $796,687 was from France, and $67,313 from the United States; brandy in wood, $141,991, of which $97,260 was from France, and $37,484 from the United States; mineral water, $121,589, of which $53,903 was from the United States, $29,819 from France, and $23,156 from Germany; beer, cider, and like drinks, bottled, $127,212, of which $53,297 was from Spain, $40,177 from the United States, $15,678 from the United Kingdom, and $14,992 from Germany; liqueurs $136,283, of which $63,117 was from Spain, and $49,127 from France; wines in wood,

$931,906, of which $493,918 was from Spain, $361,800 from France, and $40,333 from the United States; wines, bottled, $566,926, of which $232,453 was from France, $171,413 from Spain, $88,683 from Italy, and $33,643 from Germany; wines, sparkling, $189,225, of which $168,889 was from France.

Under the general heading "Cars, carriages, wagons, etc.," the principal items were: Carts, cars, and wagons for commercial or agricultural use, $388,319, of which $194,183 was from France, and $183,408 from the United States; wheelbarrows and trucks, $184,829, of which $113,561 was from the United States, $47,576 from Germany, and $15,130 from France; railway cars and coaches, $953,624, of which $873,315 was from the United States; carriages and automobiles, $832,758, of which $484,159 was from the United States, $195,567 from France, $84,062 from Germany, and $55,819 from Italy; rubber tires, $227,616, of which $146,157 was from the United States, $42,461 from Germany, and $34,441 from France; bicycles, $120,054, of which $63,611 was from the United States, and $24,976 from the United Kingdom.



Under the general heading "Paper and manufactures," the principal items were: Pulp and other paper-making material, $454,862, of which $159,621 was from Norway, $151,156 from Russia, and $91,429 from Sweden; paper of all kinds, $1,042,315, of which $386,245 was from the United States, $243,613 from France, $156,130 from Germany, and $155,160 from Spain; maps, drawing, and copybooks, unbound books, and music, $180,640, of which $62,393 was from the United States, $54,387 from Spain, and $28,092 from France; books, printed and blank, and music, bound, $261,901, of which $99,583 was from Spain, $85,098 from France, and $52,337 from the United States; and paper manufactures not specified, $290,139, of which $116,363 was from Germany, and $104,361 from the United States.

Under the general heading "Arms and explosives," the principal items were: Firearms and parts, $282,548, of which $158,217 was from the United States, $53,356 from Spain; $37,438 from France, and $17,705 from Germany; cartridges, loaded or not, and caps, $320,900, of which $193,896 was from the United States, and $102,575 from France; dynamite, blasting powder, guncotton, and the like, $543,192, of which practically all was from the United States; mining fuses, $160,815, of which $84,069 was from the United States, $36,234 from the United Kingdom, and $33,005 from Germany.

Under the general heading "Miscellaneous," the principal items were: Manufactures not specified, of celluloid, gutta-percha, rubber, and the like, $379,598, of which $132,561 was from Germany, $119,464 from the United States, and $107,335 from France; rubber belting for machinery, $241,391, of which $166,671 was from the United States, and $48,665 from the United Kingdom; rubber hose, $148,214, of which $137,239 was from the United States; packing for machinery, $142,189, of which $121,758 was from the United States; small tools, $642,572, of which $469,737 was from the United States, $90,843 from the United Kingdom, and $65,614 from Germany; musical instruments, $593,248, of which $342,840 was from the United States, $206,446 from Germany, and $28,062 from France; perfumery, $349,358, of which $245,162 was from France, $57,276 from the United States, and $39,265 from Germany; felt hats not finished, $176,487, of which $96,170 was from the United States, and $68,756 from Italy; straw hats of all kinds, $307,107, of which $173,837 was from the United States, $51,508 from France, and $23,495 from Italy; rubber cloth, $102,342, of which $64,460 was from the United States, and $23,273 from the United Kingdom; lubricating oils, $254,990, of which $248,254 was from the United States.

EXPORTS.

The exports for the fiscal year 1909–10 and for the two preceding years, by world divisions and by the principal countries thereof, were as follows:

WORLD DIVISIONS.

	1907–8	1908–9	1909–10
North America	$85,155,300	$86,736,431	$98,951,040
Europe	34,745,251	27,550,863	29,555,678
West Indies	1,030,551	806,035	860,855
Central America	414,079	420,921	619,069
South America	24,374	26,052	34,118
Asia	545	7	2,375
Oceania		10,000	
Total	121,370,100	115,550,309	130,023,135

PRINCIPAL COUNTRIES.

	1907–8	1908–9	1909–10
United States	$85,061,794	$86,472,343	$98,432,859
United Kingdom	13,107,469	12,066,055	14,267,251
France	6,196,915	5,504,985	6,141,824
Germany	11,190,120	6,429,506	4,219.785
Belgium	3,018,338	2,903,474	3,820,041
Spain	1,165.533	614,504	1,025,720
Cuba	1,030,551	805,285	852,655
Canada	93,506	264,087	518.180
British Honduras	169,422	154,858	320,219
Guatemala	228,790	239,833	281,396

The gain in exports to the United States for the year 1909–10 over the preceding fiscal year was $11,960,516, or 13.8 per cent; United Kingdom, $2,201,196, or 15.6 per cent; France, $636,839, or 11.6 per cent; Belgium, $916,567, or 31.5 per cent; Spain, $411,216, or 66.8 per cent; Cuba, $47,370, or 5.9 per cent; Canada, $254,093, or 96.2 per cent; British Honduras, $165,361, or 107 per cent; and Guatemala, $41,563, or 17.3 per cent. The only country losing among those mentioned above was Germany, a loss of $2,209,721, or 34.3 per cent.

EXPORTS BY CUSTOMHOUSES.

The exports for the last three years by ports of exit were as follows:

	1907-8	1908-9	1909-10
GULF PORTS.			
Campeche	$1,397,682.00	$1,076,036.00	$801,783.50
Coatzacoalcos	59,317.50	1,100,014.50	1,234,105.00
Chetumal	164,847.00	159,439.50	320,138.00
Frontera	149,186.50	333,368.50	893,877.50
Isla del Carmen	926,082.50	977,789.50	1,381,865.50
La Ascension	41,960.00	50,187.50	5,769.50
Progreso	13,478,692.50	11,570,971.50	10,907,151.50
Tampico	43,718,617.98	37,465,146.89	41,440,691.17
Tuxpam	217,532.50	161,429.00	332,710.50
Veracruz	22,465,683.98	19,459,579.61	19,846,212.34
Total of Gulf ports	82,619,602.46	72,353,962.50	77,164,304.51
PACIFIC PORTS.			
Acapulco	317,234.50	94,155.50	126,727.00
Altata	603,207.13	22,604.09	3,344.00
Bahia de la magdalena	1,519.50	1,930.50	2,294.00
Ensenada	73,377.07	87,608.53	154,781.89
Guaymas	27,729.00	169,815.20	404,966.50
La Paz	204,085.42	254,246.57	303,801.39
Manzanillo	100,835.87	47,793.01	32,526.00
Mazatlan	3,397,062.62	3,058,483.75	2,064,926.60
Puerto Angel	67,206.50	148,672.00	154,807.50
Salina Cruz	68,501.85	318,495.50	207,031.00
San Blas	215,547.71	117,425.65	56,472.34
Santa Rosalia	3,631,155.43	3,446,277.79	3,300,224.10
Topolobampo	80,454.83	108,375.79	228,538.97
Total of Pacific ports	8,787,917.43	7,875,883.88	7,040,441.29
NORTHERN FRONTIER PORTS.			
Agua Prieta	1,617,600.52	2,594,685.67	4,092,383.35
Boquillas	....	119.00	9,187.00
Camargo	1,588.50	1,780.50	2,573.50
Ciudad Juarez	10,572,031.47	8,689,364.30	14,475,696.95
Ciudad Porfirio Diaz	6,736,603.22	6,670,399.69	11,220,589.28
La Morita	1,090,248.92	656,933.57	1,604,759.02
Laredo	4,856,137.98	11,693,794.62	8,734,417.90
Las Vacas	5,824.50	39,498.50	5,389.00
Los Algodones	....	....	258.50
Matamoros	61,825.50	60,068.00	99,352.00
Mexicali	68,759.13	95,734.64	113,748.50
Mier	2,002.00	1,631.00	736.50
Nogales	3,963,932.90	4,209,491.89	5,046,372.00
Tijuana	36,731.50	39,134.50	74,803.59
Total of northern frontier ports	29,012,282.14	34,752,635.88	45,480,267.09
SOUTHERN FRONTIER PORTS.			
Soconusco	821,778.00	418,612.50	177,473.00
Zapaluta	128,520.50	149,214.50	160,649.00
Total of southern frontier ports	950,298.50	567,827.00	338,122.00
Grand total	121,370,100.53	115,550,309.26	130,023,134.89

The exports for the last three years under five major classifications were as follows:

	1907-8	1908-9	1909-10
Mineral products	$79,204,664	$72,136,413	$78,260,037
Vegetable products	35,102,469	33,965,277	38,857,899
Animal products	4,829,796	6,969,673	10,052,092
Manufactured products	1,504,711	1,273,940	1,768,326
Miscellaneous	728,460	1,205,006	1,084,781
Total	121,370,100	115,550,309	130,023,135

Under the general heading "Mineral products," for the year 1909-10, are included the following:

Gold	$21, 318, 201
Silver	38, 174, 561
Industrial metals and ores	18, 308, 071
Coal and asphalt	71, 538
Miscellaneous	387, 666

The bulk of the gold exported was bullion, $19,774,329, of which $17,492,204 went to the United States, to the United Kingdom $1,306,107; and to Belgium $556,377; gold in cyanides, sulphates, and in ore, $1,539,277, of which $1,529,543 went to the United States. Of silver there was exported in bars, $15,380,811, of which the United States took $11,014,676, the United Kingdom $3,524,726, and Germany $725,171; silver ore, $3,901,199, of which $3,899,430 went to the United States; silver in alloys, cyanides, or sulphates, $18,850,129, of which the United States took $14,214,055, the United Kingdom $2,566,828, and Belgium $2,050,632.

Under "Industrial metals and ores," the principal items were: Antimony, $1,093,735, all to the United Kingdom; mercury, $148,663, of which the United Kingdom took $126,808; copper, $8,903,566, of which the United States took $5,433,756, the United Kingdom $2,154,610, and France $1,314,750; copper ore, $4,182,540, of which the United States took $2,205,356 and France $1,977,000; lead, $3,402,361, of which the United States took $2,029,914, the United Kingdom $796,803, Belgium $413,181, and Germany $138,279; zinc ore, $575,279, of which the United States took $467,681 and Belgium $66,293.

The export of coal was only 144 tons, all to the United States; of asphalt, $70,695, of which the United States took $48,547 and the United Kingdom $14,927.

Under the general heading "Vegetable products" the principal items were: Cotton, $194,049, of which Germany took $70,929, the United Kingdom $50,670, and the United States $47,827; coffee, $4,043,416, of which the United States took $2,415,364, France $736,485, Germany $519,231, and the United Kingdom $202,816; rubber, $8,380,034, of which the United States took $7,613,319, Belgium $297,143, France $193,705, and Germany $178,867; chicle, $1,704,783, of which the United States took $1,031,332, Canada $416,792, and British Honduras $256,614; chili pepper, $122,198, of which the United States took $121,788; essence of aloes, $116,339, of which Germany took $44,677, France $42,045, the United States $15,213, and the United Kingdom $14,278; kidney beans, $562,177, of which Cuba took $402,571 and the United States $144,891; fresh fruits, $163,194, of which the United States took $138,090 and Canada $24,885; dried fruits, $196,378, practically all to the United States; chick-peas, $1,563,720, of which Spain took $921,014, the United States $323,776, and Cuba $309,225; Guayule rubber, $4,734,060, of which $3,768,071 went to the United States, to Germany $544,589, and to France $370,648; henequen, $11,048,116, of which the United States took $10,708,889 and the United Kingdom $299,469; ixtle, $1,545,860, of which the United States took $1,021,367, Germany $346,513, France $69,163, and the United Kingdom $52,121; mahogany and ebony, $1,160,528, of which the United States took $661,317 and the United Kingdom $375,797; dyewoods, $167,204, of which the United Kingdom took $96,066, France $34,803, and the United States $23,477; zacetón root (for brushes, etc.), $1,367,292, of which $715,052 went to France, $529,002 to Germany, and $73,129 to the United States; leaf tobacco, $331,113, of which $196,235 went to Belgium and $90,750 to Germany; vanilla bean, $788,539, of which the United States took $696,339 and France $82,400.

Under the general heading "Animal products" the principal exports were: Horses, $203,616, of which $165,030 went to the United States, $20,029 to Guatemala, and $17,822 to Cuba; cattle, $2,518,236, of which the United States took $2,379,008 and Guatemala $139,103; wool, $124,513, of which the United Kingdom took $66,949 and the United States $50,787, goatskins, $2,008,115, of which the United States took $1,958,956; hides, $3,994,593, of which the United States took $3,685,991, France $132,426, and Germany $126,962; deerskins, $232,751, of which the United States took $231,231.

Under the general heading "Manufactured products" the principal items were: Sugar, $720,420, of which $714,195 went to the United Kingdom; cottonseed meal and cake, $278,681, of which the United Kingdom took $125,045, Germany $108,046, and Belgium $45,281; palm-leaf hats, $300,937, of which the United States took $297,922; manufactured tobacco, $155,177, of which $88,195 went to France, $25,905 to the United Kingdom, and $15,243 to Germany.

Under the general heading "Miscellaneous" the principal item was foreign merchandise, reexported, $1,034,781, over 80 per cent to the United States.

CUTTING LEAVES OF SISAL AGAVE IN YUCATAN, MEXICO.

This highly useful fiber-producing agave is cultivated extensively in the thin soil of the limestone regions of the States of Yucatan and Tamaulipas. The average annual exports of this product have a value of over $13,650.000. The workmen are gathering the fiber leaves to send to the mill for treatment and extraction of the fiber.

PRODUCTS AND INDUSTRIES.

Although the mines of Mexico are the principal source of natural wealth of the Republic, yet the agricultural resources deserve greater attention than they have generally been accorded. The annual value of products of the soil and of cattle exceeds $200,000,000, which is in reality more than that of the metals.

Among the standard crops of the country Indian corn should be mentioned first, as being the great food of the people and a staple article of cultivation in every State, and also because the original home of maize is Mexico, and from there it has spread throughout the world. Sugar and cacao have been cultivated for ages; rubber was probably known by the early inhabitants before Cortes; tobacco was a favorite crop of the natives; coffee, the grape and the olive, fruits and beans, were introduced by the Spaniards, and have ever since given occupation and reward to those cultivating them on this fertile soil; and cotton, a comparatively new crop in Mexico's present economy, and one destined to add very materially to the country's activity and industry, was known to the Aztecs.

From the forests many valuable woods are obtained. Mahogany and Spanish cedar from the Tropics are the best known, but others are coming into market, and in the north much pine lumber is taken. Nuts also are gathered to an annual production of $400,000.

The live-stock industry is growing, the number of cattle, sheep, and goats running well above the millions, while horses, mules, asses, and hogs approach that figure. The breeds are being constantly improved, and more attention is given to preparation for market, whether for food or as live animals.

There are three remarkable products in Mexico, however, which should be particularly noticed. These are henequen, chicle, and guayule.

HENEQUEN is an exclusive product that offers a means of livelihood for many in Mexico. This fiber of the primitive inhabitants of Mexico is made from a cactus-like sister to the century plant, called *Agave sisalensis*. Great fields of this maguey cover most of Yucatan and its cultivation is extending to neighboring States. The visitor must not confuse this plant with the *Agave americana*, the related plant mentioned above, which produces pulque, the native drink, and is in consequence also very widely cultivated. The sisalensis variety grows on a thin rocky limestone soil and thrives in the greatest heat. The poorer the soil the greater the tensile strength of the fiber seems to be. The plant takes the form of a sharp conical spike which springs from the center and which is soon encircled by successive rings of long sword-like leaves radiating from it. A mature plant will bear from 6 to 8 rings with from 10 to 15 radiating leaves. The older the leaves the stronger the fiber. The two lower or elder rings are cut out each year; thus the cutting and developing is almost continuous. The average productive life of the plant is 10 years. In order to extract the fiber the leaves are cut off with a long knife having a hooked end and fitted with an ingenious arrangement that cuts off the spines, which are slightly poisonous, without injuring the fiber. This knife is called a corba. The Indians do most of the cutting, whole families being engaged in the work. The leaves are piled in great ricks before they are brought to the scraping mill. The difficulties of scraping, which originally meant the expenditure of much time and the employment of considerable labor, two conditions which kept the henequen industry in desuetude for many years, have given way before modern inventions. Hemp-cleaning machines that handle 150,000 leaves in 10 hours and need only 4 men to operate them have displaced the laborious hand methods that left no profits.

Cordage made from henequen was considered by a commission seeking new supplies for the Spanish navy in 1783, but the fiber seems to have been forgotten commercially until 1849, when a shipment of 200 pounds was sent to New York. Although the price realized was small, this was the beginning of the henequen industry of Mexico to-day.

The Mayans wove tapestries of the fiber, and it must have served many useful purposes in the daily lives of these people. To-day a multitude of articles are made from the product, cordage, coarse cloth, saddle bags, twine, coarse hammocks, and numerous other articles having fiber as a base. Alcohol has been recently distilled from the *Agave sisalensis*, which opens a new vista as to the possibilities of this industry, and henequen sacks should prove a profitable side line.

The average annual export during the past 10 years has a value of approximately $13,650,000.

Figuratively, "CHICLE" is Greek to most people. Literally it is Aztec, and despite the general ignorance anent chicle it forms the basis of one of the most widely advertised compositions in the United States. Without the sap of the sapote tree there would be no chewing gum. One million five hundred thousand dollars is the sum covering the annual exports of the product from Mexico and the Central American Republics.

The Aztecs were the first chewers of gum on the continent, obtaining their supply from the Achras sapote tree by tapping, and to-day the manner of gathering the sap is in close analogy to the process of collecting maple sugar in New England. The tree yields a fruit, the sapadilla pear, pleasing in taste, and is composed of a very hard redwood that should be valuable to the cabinetmaker, for after being seasoned it takes a high polish and is readily carved. We have the best testimony of the durability of sapote wood in the lintels still existant in the ruined palaces and halls of Uxmal. Forty to fifty feet is the average height of the full-sized tree, with branches spreading far in a luxuriant covering of leaves.

The work of the chiclero or chicle gatherer falls in the rainy seasons, for then the sap is up. With his machete he cuts a series of V-shaped incisions spirally on the tree which he climbs after the fashion of a lineman up a telegraph pole, and then the sap flows into a pail at the foot of the trunk. It is white, this sap, like milk when oozing from the wound, but thickens and turns yellow in the air. The chiclero receives 10 to 15 cents per pound for the result of his labor and could bring in 15 pounds per day, but the trees would suffer in his efforts to get rich quick; deep cuttings give a greater yield, but deep cuttings mean the early death of the tree. Trees yield for 25 years when carefully treated.

The raw chicle is boiled and kneaded to void its water component and the gum turns gray in the process. Made up into irregular loaves it is ready for shipment. Chicle was sold by the gross weight and formerly the temptation to hide a rock or two in a loaf sometimes proved stronger than the poor chiclero could resist. The temptation has gone with the introduction of quality clauses in the chicle contracts of to-day. Ten cents per pound is the United States tariff on the product, but the thrifty manufacturer imports by way of Canada, where the chicle is refined and reduced in weight one-half. Mexico exported, during the fiscal year 1910, chicle amounting to 3,172,667 kilograms (kilogram=2.20 lbs.) and valued at $1,704,783, which gives a good idea of the extent of the chewing-gum industry. In illustrative statistics this is enough chicle to build a duplicate Washington Monument in chewing-gum blocks. This product will continue, therefore, to be a specific wealth producer in Mexico as long as people chew gum.

The GUAYULE (wy-u-lay) shrub has turned the waste places of Mexico into potential gold mines. Thousands of valueless acres that kept their owners land-poor for generations have risen to unbelievable acreage assessment with the discovery of the rubber-producing qualities of this stunted bush. Four hundred and fifty thousand dollars is the monthly income accruing to one prominent family from this source. It was nothing in 1905. *Parthenium argentatum* is the scientific name of the dwarf tree that grows wild in the north central section of Mexico, heretofore considered of no value on the land and even a detriment. It varies from 1 to 3 feet in height, is found at an altitude of from 3,000 to 6,000 feet, has a gray bark and spreads into many branches, often knotted, which terminate in the reproduction shoots. The plant blossoms in September and October. The name is perhaps derived from the Spanish word "hay," there is (here is), and the Spanish-American word "hule," rubber. The Indians used it for domestic purposes. It produces from 6 to 12 per cent of rubber, which, while no equaling the highest grades in quality, finds a ready sale in the rubber markets of the world.

At the centennial exposition in Philadelphia in 1876 the Mexican State of Durango had an exhibit of rubber made from guayule, but it attracted little attention at the time, and it was not until 1896 that it received careful analytical examination and in 1899 processes of extracting its rubber component were patented. The first factories were erected in 1903–4, and the high price of rubber assured the industry a profitable advancement, which it maintains to-day. Guayule has four distinct advantages over other rubber plants. It grows on an almost sterile soil, in a healthy subtropical climate, it can be gathered all the year round, and it can be cheaply treated. The cost of manufacturing crude rubber from the guayule varies from 25 cents to 40 cents per pound.

The industry reached the high-water mark in 1910, when during the last four months of the year the guayule output was 6,000,000 pounds, valued at a dollar gold a pound. Sixty-five million dollars of capital is invested in the industry, which in spite of a lower price for rubber pays big dividends.

The mines of Mexico still add immensely to national wealth, and offer one of the leading fields of industry in the Republic. The known output of five leading minerals in the fiscal year 1909-10 was 158,965,832.86 pesos, an increase of 9,017,832.86 pesos over the previous year.

	Mexican currency.
Gold	48, 428, 841. 71
Silver	76, 405, 754. 15
Copper	26, 172, 214. 00
Lead	6, 808, 465. 00
Zinc	1, 150, 558. 00
The production of other mineral substances is thus given:	
Iron (estimate)	1, 200, 000. 00
Coal (estimate)	4, 400, 000. 00
Mineral oil (estimate)	2, 800, 000. 00

The quantity of gold produced in Mexico in the fiscal year 1909-10 was 36,222 kilograms, or 1,188,537 ounces troy, and of silver 2,257,363 kilograms, or 72,574,220 ounces troy.

Mexico consumes about 4,500,000 tons of coal and about 2,000,000 tons of coke annually. As the total output of the country is less than 1,000,000 tons each year, consumers are dependent on the United States and Europe for the remainder of their fuel supply. It is claimed, however, that at the present rate of development of the coal industry in Mexico it will be only a few years more until it will be unnecessary to import coal at all.

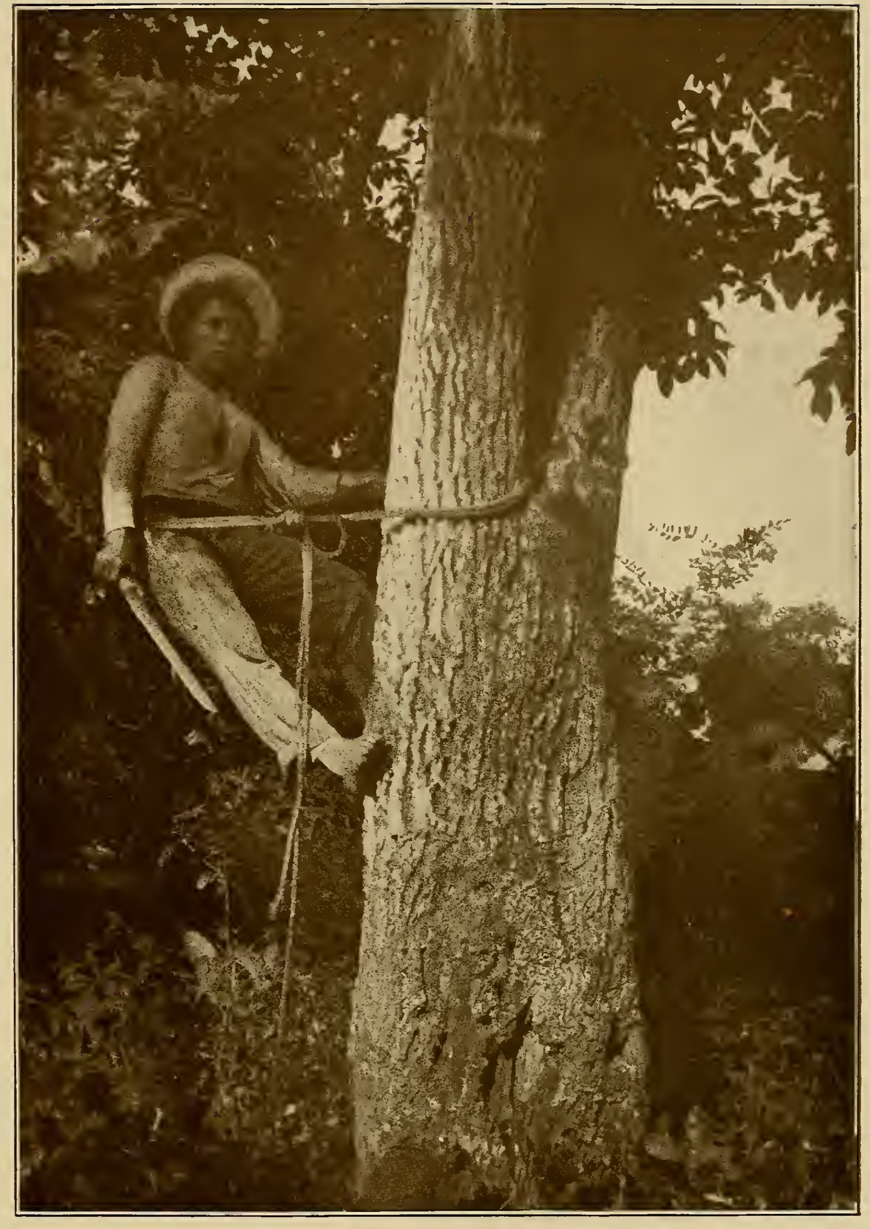
Except in a zone 50 miles in width along the border, the mining laws of Mexico do not discriminate against the foreigner. A foreign company, partnership, or individual may conduct explorations, denounce mines, and obtain mineral grants under the same terms and conditions as a Mexican citizen. To enjoy these privileges not even residence in the Republic is necessary, since both the denouncement may be made and the title secured through a representative.

RAILWAYS AND INTERIOR WATERWAYS.

According to the message of the President on September 16, 1910, the one-hundredth anniversary of the independence of the Republic, there were then in operation 24,559 kilometers (15,260 miles, including 4,840 kilometers—3,007 miles—subject to the jurisdiction of the States) of railway in the Republic.

The policy of the Mexican Government toward railroad construction and the management of the lines in the Republic had been from the beginning one of encouragement of private interests. Foreign capital had been largely instrumental in extending and developing this industry, and the benefit to the country at large has been of remarkable value. Furthermore, the acquiring of large holdings of shares in the various railroads of the Republic by the government has rendered its relations with them more intimate and active.

The 24,559 kilometers (15,260 miles) of railway in Mexico are best considered under the two great heads—the system owned and controlled by the Government and the systems still owned and managed in the interests of the private management.



A CHICLERO OR CHICLE GATHERER AT WORK.

All chicle exported is used in the manufacture of chewing gum as it forms the basis for that popular article. During 1910 Mexico exported chicle valued at $1,705,000. The quantity of these shipments is sufficient to build a duplicate Washington Monument in chewing gum blocks. The chiclero is here shown climbing the tree by a native rope device. He carries with him the machete with which he makes the incision for collecting the gum.

The first division is comprehensively included in the corporation known as the National Railways of Mexico (Ferrocarriles Nacionales de México), which owns by direct ownership the properties formerly known as follows:

	Kilometers.	Miles.
Standard gauge:		
Mexican Central Ry., main line and branches	5,659=	3,516
National R. R. of Mexico	1,960=	1,218
Narrow gauge:		
Uruápan division (national railroad)	512=	318
Michoacan & Pacific Ry. (leased)	92=	57
Hidalgo & Northeastern Ry. (national lines)	244=	152
Total	8,467=	5,261
(N. B.—The decreased mileage as compared with earlier reports is due to accurate remeasurements.)		
Sidings and yards	1,022=	635
Total	9,489=	5,896

This corporation has possession of the Texas Mexican Ry. from Laredo Bridge to Corpus Christi, but as the property lies in Texas, it is not included within Mexican figures; the length of this line is 261 kilometers—162 miles.

The National Rys. of Mexico control—

	Kilometers.	Miles.
Standard gauge:[1]		
Mexican International R. R.	1,476=	917
Tehuantepec National Ry. (main line, 190 miles; branches, 30 miles)	354=	220
Veracruz & Isthmus R. R.	425=	264
Pan American Ry	478=	297
Narrow gauge:		
Interoceanic Ry	1,184=	736
Mexican Southern Ry	454=	282
	4,371=	2,716
Total	13,860=	8,612

INDEPENDENT RAILROADS.

Among the larger companies operating railways in the Republic the following deserve mention:

	Kilometers.	Miles.
Mexican Ry. (standard gauge)	547=	340
Kansas City, Mexico & Orient (standard gauge)	444=	276
Mexican Northern Ry. (standard gauge)	130=	81
Mexican North Western R. R. (standard gauge), controlling the Chihuahua & Pacific R. R., and the Sierra Madre & Pacific R. R. and Rio Grande, Sierra Madre R. R	589=	366
Parral & Durango Ry. (standard, 57 miles; narrow, 8 miles)	105=	65
Potosi and Rio Verde Ry. (narrow)	64=	40
Southern Pacific R. R. of Mexico (standard), controlling the Sonora R. R., and the Cananea, Yaqui River & Pacific R. R	1,923=	1,195
Veracruz Rys. (narrow)	72=	45
United Rys. of Yucatan (standard, 103 kilometers; narrow, 707 kilometers)	810=	503
	4,684=	2,911

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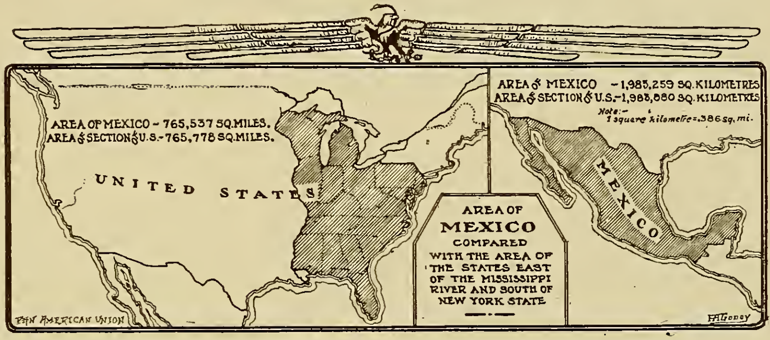
[1] The Mexican-Pacific Ry. is now included in the Mexican Central Ry. statement above, as part of the section between Guadalajara to Colima.

	Kilometers.	Miles.
To these larger lines must be added many miles of smaller and local roads that are used in mines, or are under State jurisdiction, as well as sidings, very recent extensions, and certain extensions of electric traction, amounting altogether to	6,015	3,737
Total	10,699	6,648
The lines controlled directly by the Government have been shown to amount to	13,860	8,612
Grand total	24,559	15,260

Since the date of this report (Sept. 16, 1910) there has been only a slight increase during the rest of the year in the extent of railways in the Republic; the amount is given at 87 kilometers (54 miles). In the State of Chihuahua the Mexico North Western Railway pushed work between Terrazas and Madera and has completed a branch into the Cusihuiriachic mining district. The Southern Pacific System of Mexico confined its work to the Territory of Tepic, finally reaching its capital. Some work was done by the Kansas City, Mexico & Orient. Considerable advance for the future was planned, however, in Zacatecas, Durango, Sonora, and other States. The proposed line from the Isthmus of Tehuantepec to Campeche, which, when finished, will connect the State of Yucatan by rail with the rest of the Republic, is to be called the Veracruz, Tabasco & Campeche Railway, and as the concessionaires have complied with all the conditions of the contract, work will be commenced in the near future.


AREA OF MEXICO - 765,537 SQ.MILES.
AREA OF SECTION OF U.S.-765,778 SQ.MILES.
UNITED STATES
AREA OF MEXICO - 1,985,259 SQ.KILOMETRES
AREA OF SECTION OF U.S.-1,988,080 SQ.KILOMETRES
Note:- 1 square kilometre=.386 sq.mi.
MEXICO
AREA OF MEXICO COMPARED WITH THE AREA OF THE STATES EAST OF THE MISSISSIPPI RIVER AND SOUTH OF NEW YORK STATE
PAN AMERICAN UNION
HAGooey

COMPARATIVE AREA OF THE REPUBLIC OF MEXICO WITH THE EASTERN SECTION OF THE UNITED STATES.

The recently completed building of the Union Terminal Station at Veracruz, which has been two years in construction, is a magnificent structure. It is both beautiful and useful, its style is of the Spanish colonial period, it is commodious in every way, and is equipped in a thoroughly modern way.

THE PRESS IN MEXICO.

To Mexico belongs the honor of the first printing press in all America. In 1536, during the rule of the beneficent viceroy, Don Antonio de Mendoza (1535–1550), a small machine was set up in the City of Mexico, and from it came the first original book, a plea from Las Casas for a better life. No copy of this Steps to Heaven is in existence, but its influence is felt even to the present day among those with whom the name of Las Casas is blessed.

Literature in Mexico waxed or waned according to the condition of society during colonial times. It showed itself chiefly in philosophy, poetry, and imaginative productions, for a rigid censorship was maintained by Spain, and current opinion had little chance to express itself in written words. The first newspaper was published in Mexico in 1693, but it is hard to trace in history and harder still to compare this first effort with the press of modern life.

As the principles of government and social freedom began to be understood, the people demanded a medium for their ideas, but the deplorable condition of the so-called press was another proof of the incessant endeavors on the part of the authorities to keep the people in intellectual bondage. Four daily papers appeared in Veracruz between 1804 and 1807; three of them were soon discontinued, and the other was prohibited from publishing political news from foreign countries, that being the

CIGARETTE FACTORY IN MEXICO.

Owing to the general use of cigarettes in Mexico these factories are of greater importance than the cigar factories. At the end of 1909 there were registered in the Republic 437 such establishments, some of them being the best equipped in the world. The total annual output of these factories reaches considerably over half a billion packages, the package usually containing 16 cigarettes.

privilege granted only to the Gazeta de Mexico, an official publication that made its appearance about the middle of the eighteenth century, and which is valuable as a repository of facts and laws, but worthless for opinions.

It would be impossible at the present day to enumerate all the newspapers or periodical pamphlets which were published just before or after the revolution of 1810. They were usually suppressed as soon as they appeared. As one historian puts it, "the blood of Hidalgo was still cooling on the gallows when a printing office was endowed by a Dr. Cos, who gave the insurrection its first type, cut with his own hand." As the revolution progressed, the press increased; but for years they retained the character of pamphlets and political sheets of partisanship rather than that of newspapers.

The history of the Mexican press is a complicated one, and its development of slow growth. Few papers have survived their half century. The Two Republics, for instance, one of the first English papers to be published in the country, was founded in 1867, but it has been superseded by the Mexican Herald, founded in 1879. In 1884 papers were first sold on the streets of the capital, and from that date they have taken on the character of modern dailies and furnished real news to the reading public of both the City of Mexico and the interior. In 1910 there were 225 periodicals registered in the capital, among which are several weeklies of a serious or humorous character, usually illustrated, and a number of commercial, financial, scientific, and literary papers appearing at regular intervals. Included are 2 English dailies, 10 Spanish, and 1 French. In the interior each large city has one or more papers of local prominence, but the metropolitan dailies circulate extensively throughout the country.

The popular size for the daily paper is about 24 by 17 inches, with 8 to 10 pages on week days, and special sheets or parts on Sundays. The first page always carries the most recent home and local news, in which are found telegraphic messages from all over the world. On the second and following pages advertisements begin to appear, but as a rule they occupy more and more space toward the back, until, in some cases, the final page is occupied completely with advertisements.

These advertisements are modern in every sense of the word, whether they be in Spanish or English. Illustrations are generously used, and the other methods resorted to by advertisers are successfully practiced. It may be fair to add that both in the appearance of reading matter and in the advertising display the papers of Mexico resemble closely those of the United States, while in South America this similarity is rather toward those of London and Paris.

As far as rates for advertising matter are concerned there are wide divergences. In the best dailies of the City of Mexico, $0.84 gold per column inch each insertion is one rate; if paid by the line, which is one way of estimating what may be translated as "reading ads.," $0.25 gold per line each insertion is another; if paid by the word, as "want ads." and others of that character 1 cent a word is a third. Even higher prices are charged for display advertisements, Sunday editions, and by a few papers that guarantee a big circulation. A discount is often allowed for contracts extending over several issues or considerable time. In the smaller papers and some of those published at intervals greater than a day, more moderate terms are the rule. Outside the capital, a few of the large cities have newspapers with a generous circulation, and their advertising rates are almost equivalent to those within the City of Mexico. Those of only local importance have a rate fluctuating around $0.10 gold per column inch each insertion, or 1 cent Mexican a word. Many papers reserve their advertising rate for negotiation with each advertiser.

The amount of the copies in circulation is also variable. Some of the popular metropolitan dailies issue 100,000 or more. Those less widely read or distributed issue from 10,000 to 30,000, while the weeklies and technical monthlies seldom claim more than from 2,000 to 20,000 each issue. It should be stated in conclusion that recently the reading public is increasing, and the subject matter which they read is becoming broader and more vital, so that there is every probability that circulations of all kind of periodicals will show a favorable growth.

SALVADOR

The Republic of El Salvador, sometimes erroneously called San Salvador, the name of its capital, is the smallest of the 21 American Republics. It is the only one of the Central American States lying wholly on the Pacific Ocean; it is bordered on the land side by Guatemala and Honduras. Salvador has an area of 7,225 square miles, with a population of over 1,700,000 inhabitants. Two mountain chains cross the country almost in its entire length, sending out numerous spurs and attaining considerable altitudes. Inclosed by these ranges are numerous valleys, among which that of the River Lempa is the most important. Coffee, cacao, tobacco, indigo, rubber, and Peruvian balsam are the most important products. Gold and silver are mined.

COAT OF ARMS OF EL SALVADOR.

The constitution of Salvador now in force was promulgated on August 13, 1886. The legislative power is vested in the National Assembly, composed of one chamber, called the National Assembly of Deputies, which meets annually between the 1st and 15th of February for not more than 40 sessions; extra sessions, however, may be called by the President of the Republic at any time. This body has 42 members, 3 Deputies being elected for each Department by direct popular vote for a term of one year, one for every 15,000 inhabitants. Every citizen over 18 years of age is not only entitled but obliged to vote.

The President and Vice President of the Republic are elected by popular vote for a term of four years. The salary of the President is fixed at $9,600 per annum. A Cabinet of four secretaries assists the President in the administration of the affairs of the country. Though appointed by the President, the Cabinet is also responsible to the National Assembly. The present executive officials are:

President: Dr. Manuel Enrique Araujo.

Vice President: Sr. Onofre Duran.

Secretary of Foreign Affairs, Justice, and Charities: Dr. Francisco Dueñas.

Secretary of Interior, Promotion, Public Instruction, and Agriculture: Dr. Teodosio Carranza.

Secretary of Treasury and Public Credit: Sr. Calixto Velado.

Secretary of War and Marine: Commander-in-Chief of the Army.

These Cabinet officers are further aided in their work by assistant secretaries who are assigned some distinct branch of the department.

The administration of the Department of Foreign Affairs and Justice and Charities (Ministerio de Relaciones Exteriores, Justicia y Beneficencia) is conducted as two divisions, with an assistant secretary for each. The section of foreign affairs is intrusted with the administration of the diplomatic and consular intercourse, negotiations with foreign governments, settlement of boundary disputes, and arrangements for international expositions. The division of justice and charities has supervision of the courts, registry of deeds, and all legal matters; also the administration of hospitals, penal and charitable institutions, and cemeteries.

The Department of Interior, Promotion, Public Instruction, and Agriculture (Ministerio de Gobernación, Fomento, Instrucción Pública, y Agricultura) is divided into four branches also, with an assistant secretary for each. The department of interior is charged with the administration of the Departments, districts, and municipalities. Matters affecting general elections, police and fire regulations, public health, charities, post offices, telephones and telegraphs, the National Printing Office, and the publication of the Diario Oficial also fall within its jurisdiction. The division of promotion has charge of all public works, the water supply and sewerage, street paving lighting, the construction and maintenance of roads, bridges, wharves, ports, waterways, and railroads. The educational division of this department is charged with the supervision of all schools, both public and private, together with libraries and institutions of special and higher instruction. The division of agriculture establishes and maintains experimental farms, agronomical schools, publishes a bulletin devoted to agriculture and kindred industries, and in every way possible serves to aid in the agricultural development of the country.

PRESIDENT MANUEL E. ARAUJO.

The Department of the Treasury and Public Credit (Ministerio de Hacienda y Crédito Público), in addition to collecting and disbursing the national funds, attends to the service of the public debt and controls the customhouses and international-revenue offices. It also has supervision over the liquor distilleries and the preparation of commercial statistics.

The Department of War and Marine (Ministerio de Guerra y Marina) has charge of the maintenance and instruction of the regular army as well as supervision over the military schools in the country.

The judiciary of the country is composed of a supreme court of justice, one court of third instance (in the capital), several courts of first and second instance, and a number of minor courts. The supreme court is composed of the three judges of third instance and four judges of second instance (the two judges of each of the two courts of second instance of the capital). All judges of second and third instance, including those of the supreme court, are elected by the National Assembly for a term of two years, and the judges of first instance are appointed by the supreme court for a term of two years. The justices of the peace are appointed by the judges of first instance, excepting those in the capital, who are appointed by the supreme court.

THE CAPITOL IN SAN SALVADOR, REPUBLIC OF SALVADOR.

The capitol is called also the National Palace, and is one of the most attractive of public buildings in America. Salvador has but one chamber in the legislative body, which has spacious accommodations here. Besides this arrangement, there was reserved abundant space for other Government departments and officials. Construction was begun in 1905 and completed in 1910.

The national army of Salvador may be divided into three distinct parts, namely, (1) available forces, consisting of 78 chief officers, 512 petty officers, and 15,554 privates; (2) forces that can be mustered in and made available, consisting of 49 chief officers, 356 petty officers, and 11,176 privates; (3) the reserve forces, composed of 251 chief officers, 1,743 petty officers, and 15,554 enlisted men. The grand total for the three divisions is thus—378 chief officers, 2,611 petty officers, and 82,881 enlisted men.

Distributed over the country are 101 post offices affording adequate postal service; also 134 telegraph offices with 2,521 miles of telegraph lines and 148 telephone stations with 2,074 miles of lines. The telephone system in Salvador is so excellent that many of the telegraph offices have been changed into telephone stations.

The Republic is divided into 14 Departments, subdivided into districts, and these into towns and municipalities. The governors of the Departments are appointed by the President for a term of four years, as are also the executive chiefs of the districts. The mayors and municipal councils of the cities are elected by direct vote.

SALVADOR IN 1910.

During the year 1910 the Republic maintained peaceful and cordial relations with all Governments, and with the Central American States the ties of friendship were especially strengthened. El Salvador was represented at the centennial festivities of Mexico, Chile, and Argentina and delegates from Salvador were present at many international conferences and congresses in both America and Europe.

The national elections were held during the year and passed off quietly and satisfactorily—a proof, as the President states in his annual message, that the people of Salvador understand and appreciate the value of democracy. President Figueroa took this occasion to congratulate the recently elected President Araujo and the people of the country on their choice and the manner in which they manifested it.

An indication of the scientific progress made by the Republic was shown in 1910, when the country was declared free from smallpox. This happy result was due to the continuous efforts of the board of health, which, using the serum of the National Institute of Vaccination, was able to vaccinate practically the whole people. After the threatened epidemic in 1909, suppressed by this vigorous action, no focus of the disease was left in the country.

November 5, 1911, was declared to be the centennial anniversary of the cry of independence uttered in the capital, San Salvador, in 1810, and the day was set apart as a national holiday, festivities were planned, and a monument is to be erected in the city commemorative of the event.

Among local happenings of the year were an agricultural exhibition in San Miguel, at which the products of the country were displayed; the inauguration of the new water-supply system for the city of San

ROAD BUILDING IN SALVADOR—VIEW OF ROAD LEADING TO PUERTO DE LA LIBERTAD.

Salvador is the most densely populated of the Latin-American Republics. To facilitate communication and transportation well-built highways are being constructed by the Government throughout the Republic.

Salvador, and of an international bridge over the Sumpul River between Salvador and Honduras. The splendid highways that have been building for months past have been opened for traffic, and the wisdom of the expense and labor involved in them is evident. The public schools have been increased and improved, and in the university a new faculty, that of engineering, has been established, after its abandonment many years ago.

In commercial relations the nation was prosperous, there being an increase in both exports and imports. Financially the same report can be made, a sound basis having been maintained throughout the year. Salvador has continued to meet the services of its loan with praiseworthy punctuality, quite in accordance with past experience. Nevertheless, certain reforms in the financial conduct of national finances would redound to the credit and net income of the country, and these are to be introduced as soon as the new administration assumes office.

FINANCE.

According to the report of Señor Don Manuel López Mencía, acting minister of finance and public credit, made to the National Assembly on February 18, 1911, the receipts and expenditures of the Republic for the year 1910 were as follows:

	Colones, silver.	United States gold at 150 premium.
RECEIPTS.		
Import duties	5,333,680.59	$2,133,472.24
Export duties	866,649.55	346,659.82
Tax on liquors	2,602,958.33	1,041,183.33
Stamped paper and stamp tax	297,912.24	119,164.89
Minor taxes	960,253.26	384,101.30
Services	559,411.60	223,764.64
Extraordinary receipts	2,630,760.70	1,052,304.28
Total	13,251,626.27	5,300,650.50
EXPENDITURES.		
National Assembly	40,764.57	16,305.83
Presidency of the Republic	10,635.00	4,254.00
Department of government	1,937,948.18	775,179.27
Department of fomento	996,429.57	398,571.83
Department of public instruction	492,174.38	196,869.75
Department of foreign affairs	224,307.86	89,723.14
Department of justice	498,929.12	199,571.65
Department of charities	508,350.06	203,340.02
Department of treasury	590,818.19	236,327.28
Department of public credit	4,659,658.28	1,863,863.31
Department of war and marine	3,067,531.75	1,227,012.70
Sundry disbursements	178,701.35	71,480.54
Total	13,206,248.31	5,282,499.32

The assets on hand at the beginning of the year 1910 were 643,330.54 colones silver, or $257,332.22 gold. The excess of receipts over expenditures, as given in the foregoing tables, was 45,377.96 silver, so that the assets on hand at the end of the year amounted to 688,708.50 silver, or $275,483.40 United States gold.

If the extraordinary receipts, amounting to 2,630,760.70 silver, be subtracted from the receipts above, the net receipts of the year are shown to be 10,620,865.57 silver, an amount less by 95,233.08 silver than the receipts of the preceding year.

Comparing the net receipts for 1910 with the expenditures of the same year there was a deficit of 2,585,382.74 silver, or $1,034,153.10 gold. This deficit was covered, as shown in the report of the acting minister, by various loans and negotiations.

The receipts on account of import duties were from the following customhouses:

	Colones silver.
Sonsonate	3, 522, 875. 05
La Union	1, 086, 766. 03
La Libertad	554, 400. 57
Duties on goods by parcels post paid at the treasury	169, 638. 94
	5, 333, 680. 59

The receipts from this source for the year 1909 were 5,841,734.02, showing a decrease of 508, 053.43 silver.

The receipts on account of the export taxes were from the following customhouses:

	Colones silver.
Sonsonate	430, 359. 84
La Union	114, 528. 03
La Libertad	125, 926. 49
El Triunfo	215, 835. 19
Total for 1910	886, 649. 55
Total for 1909	882, 380. 87
Increase for 1910	4, 268. 68

The liquor tax was derived principally from the bottle tax on the sale of aguardiente, amounting to 2,408,652.86 silver on 1,589,190 bottles. The remainder of the tax was derived from licenses, fines, and tax on alcohols used in the industries. The total products of the liquor tax for 1910 exceeded that for 1909 by 225,535.08 silver. The cost for maintenance of the liquor service amounted to 126,770.23 silver.

The amount received on account of stamped paper and the stamp tax was 19,130.22 colones in excess of the receipts of the preceding year.

There was a remarkable increase for the year 1910 in the receipts derived from minor taxes. In 1909 the total from this source was 391,717.10 colones. In 1910 it was 960,253.26 colones. These taxes are: Gunpowder and saltpeter tax, tax on cartridges, transport tax, tax in favor of education and of the courts, the hospital tax, taxes in favor of boards of improvement and of agriculture, and others of a like kind. Public services and utilities returned 384,649.88 colones less in 1910 than in 1909. The items of these receipts in 1910 were:

	Colones.
Telegraphs and telephones	294, 914. 25
Cable	91, 837. 76
Post office	71, 891. 03
National printing office	21, 916. 56
San Salvador city police	11, 715. 00
Central penitentiary	6, 311. 79
Western penitentiary	12, 400. 50
Land registry office	48, 424. 71
Total	559, 411. 60

PUBLIC DEBT.

The public debt on December 31, 1910, according to the report of Sr. Mencía, was as follows:

Gold debt.

Sundry creditors	$2, 365, 229. 67
Outstanding obligations	262, 100. 68
Government sterling bonds of 1899 and 1908, principal, interest, and charges	8, 039, 254. 00
Total	10, 666, 584. 35

Silver debt.

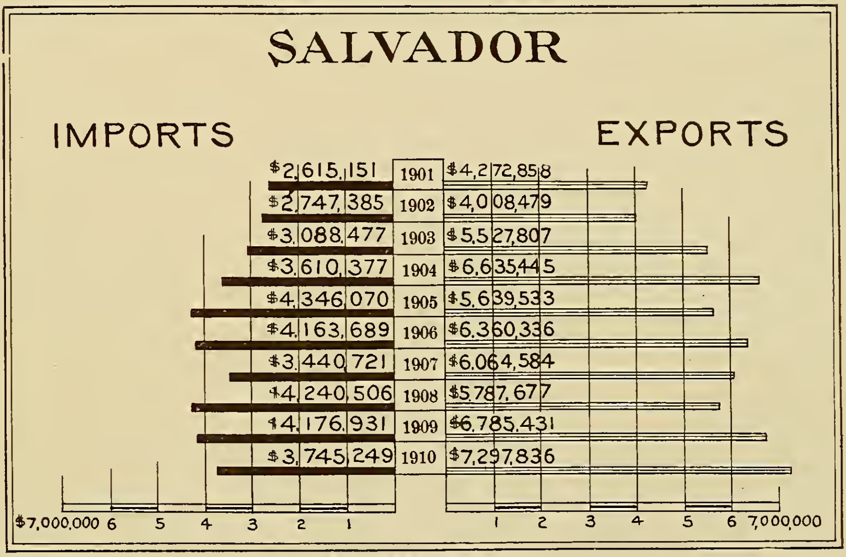
	Colones.
Sundry creditors	337, 615. 66
Outstanding obligations	211, 839. 94
Salvador bonds, capital and interest	3, 619, 728. 21
Other bonds	486, 485. 34
Salaries and expenses due	1, 416, 185. 06
Deposits	2, 626. 24
Special fund	132, 579. 35
Total	6, 207, 059. 80

The total amount of the debt is, therefore, 32,873,520.67 colones, or $13,149,408.27.

In 1910 the customs duties specially applicable to the foreign loan of 1908 were as follows:

	Colones.
Duty of $3.60 gold per each 100 kilograms of imports payable in silver at the rate of 150 per cent premium	1, 289, 622. 42
Duty of $0.40 gold per each 46 kilograms of coffee exported payable in silver at 150 gold premium	610, 294. 35
Total	1, 899, 916. 77

From this sum there was paid on account of said loan £72,488 of principal, interest, and fixed charges.



PAN-AMERICAN UNION

FOREIGN COMMERCE.

The foreign commerce of the Republic of Salvador for the year 1910, according to a special report prepared for the Pan American Union by Sr. Don Bernardo Arce, director of the bureau of fiscal accounts of Salvador, dated June 7, 1911, amounted to, imports, $3,745,249.19 gold, and exports, 18,244,590.18 colones silver. The gold premium used as a basis of conversion by Sr. Arce was 150. On this basis the value of the exports in gold amounted to $7,297,836.07, and the total foreign trade for the year to $11,043,085.26.

The trade for the year 1909 was: Imports, $4,176,931.56 gold, and exports, 16,963,575.30 colones silver. There was, therefore, a decrease for the year 1910, as compared with 1909, in imports of $431,682.37, and an increase in exports of 1,281,014.88 colones silver. On a basis of gold premium at 150 per cent this excess in exports represents $512,405.95 gold, a net increase in the total trade of $80,723.58. The balance of trade for the year 1910 in favor of the Republic was $3,552,586.88.

IMPORTS.

The imports by countries of origin for the years 1909 and 1910 were as follows:

Countries.	1909	1910	Countries.	1909	1910
United States	$1,344,315.79	$1,346,597.13	Switzerland	$3,443.82	$4,356.36
United Kingdom	1,438,613.90	1,165,992.80	India	2,978.01	3,780.37
Germany	482,341.70	407,391.97	Denmark	5,425.64	2,607.33
France	285,169.66	262,294.21	Portugal [1]		2,238.55
Italy	157,707.99	133,699.78	Norway [1]		1,706.18
China	64,766.70	73,618.86	Cuba	1,597.62	812.50
Spain	82,473.91	67,185.04	Guatemala [1]		763.00
Belgium	104,550.13	65,613.37	Costa Rica [1]		268.00
Netherlands	38,196.40	63,413.65	Panama [1]		242.40
Japan	69,061.82	62,172.48	Turkey [1]		209.48
Nicaragua	12,368.42	19,214.44	Russia [1]		108.75
Sweden	12,000.33	15,179.35	Trinidad [1]		170.00
Honduras	36,386.69	13,414.74	Uruguay [1]		75.00
Austria-Hungary	16,583.87	12,468.21	Other countries	3,671.42	
Ecuador	7,075.00	10,656.00			
Mexico	8,202.74	8,999.24	Total	4,176,931.56	3,745,249.19

[1] In 1909 included in Other countries.

The following table shows the imports by articles for the two years:

Articles.	1909	1910	Articles.	1909	1910
Cotton cloth, and manufactures	$1,492,999.74	$1,091,245.75	Petroleum and oils	$23,645.79	$14,610.68
Flour	260,708.27	247,437.65	Coin	74,897.22	12,224.00
Hardware	199,427.10	229,429.23	Lime and cement	11,472.83	10,167.84
Drugs and medicines	193,213.82	214,509.67	Furniture and cabinet work	12,006.41	10,112.68
Boots and shoes	145,961.76	174,888.02	Straw hats	7,075.00	9,826.00
Cotton yarn	128,362.99	131,372.00	Fancy articles	7,123.66	9,141.39
Soap and candle grease	89,059.65	93,986.53	Fertilizers	2,661.50	8,870.87
Silk fabrics, and manufactures thereof	89,098.85	68,809.80	Jewelry	4,270.75	8,097.25
Wines	78,041.25	63,909.72	Hemp manufactures	4.780.34	7,071.69
Provisions	102,863.38	62,950.74	Printed books	6,841.93	5,836.66
Bags for coffee	117,904.06	59,315.66	Marble	7,842.75	5,503.57
Machinery	53,149.39	53,856.46	Linen cloth, and manufactures thereof	11,621.52	5,466.75
Woolen fabrics, and manufactures thereof	68,304.63	53,032.51	Stearin candles	3,542.98	5,155.17
Distilled liquors	25,389.06	30,709.22	Leather goods	3,312.14	4,317.02
Silk thread	22,790.06	33,666.51	Spices and tea	4,804.45	4,209.01
Haberdashery and notions	22,217.36	29,125.47	Wood and cork	3,252.65	3,393.96
Paper and stationery	26,329.04	28,484.30	Tobacco of all kinds	1,749.01	3,164.89
China and porcelain ware	32,466.93	26,691.97	Mineral waters	3,352.55	2,388.81
Beer and ginger ale	22,299.32	24,939.02	Woolen yarn	210.36	1,930.89
Hats, not including straw hats	29,099.49	23,278.17	Plants and seeds [1]		285.88
Fence wire [2]		22,833.79	Linen thread	109.85	153.78
Perfumery	17.563.47	21,958.37	Live animals [1]		90.00
Matches	34,165.84	20,648.72	Cacao [1]		48.56
Cheese and butter	13,045.65	19,640.08	Indian corn	1,728.98	34.00
Glassware	23,811.91	19,435.06	Miscellaneous articles	302,268.75	346,724.56
Agricultural machinery [2]		16,752.35	Articles admitted free	389,087.12	403,516.51
			Total	4,176,931.56	3,745,249.19

[1] Included for 1909 in Miscellaneous articles.

[2] Included for 1909 in "articles admitted free."

EXPORTS.

The following table shows the exports for the year 1910, by countries of procedure, the values being converted on the basis of a gold premium of 150.

United States	$2,279,668.59	Costa Rica	$46,558.92
Germany	1,584,632.26	Netherlands	43,015.36
France	1,097,118.04	Chile	37,313.00
Italy	609,673.52	Mexico	34,434.24
United Kingdom	483,808.59	Honduras	33,127.19
Austria-Hungary	419,775.53	Nicaragua	7,805.94
Spain	170,871.44	Guatemala	6,367.86
Panama	142,546.24	British Columbia	3,051.44
Peru	95,757.10	Belgium	660.48
Norway	77,704.48	Hawaii	489.60
Ecuador	76,204.41	Morocco	200.00
Sweden	47,051.84	Total	7,297,836.07

The following table gives the exports by articles, arranged in the order of value and converted at the same rate of exchange as that used in the foregoing table:

Coffee:		Deerskins	$7,023.10
Clean	$4,819,184.28	Woods	3,850.00
In parchment	309,576.77	Beans	3,800.88
	5,128,761.05	Lard	2,417.40
Silver:		Cacao	644.16
In bars	487,063.41	Mats	575.60
Auriferous	132,756.00	Henequen	540.00
	619,819.41	Lead in bars	531.77
Gold in bars	601,318.67	Tobacco, manufactured	452.00
Indigo	314,843.30	Alligator skins	376.00
Sugar:		Jute	348.60
Ordinary	279,107.00	Pigskins	298.00
Panela	13,647.87	Bricks	290.00
	292,754.87	Printed books	200.00
Balsam	81,120.00	Balsam seed	170.00
Hides of cattle	76,429.18	Cocoanuts	169.70
Rubber	38,698.10	Starch	109.40
Ores	35,044.40	Boots and shoes	83.60
Leaf tobacco	19,370.30	Sheepskins	68.00
Horns	10,034.94	Honey	62.60
Indian corn	9,891.54	Sole leather	22.00
Hats, straw	8,736.70	Stearin candles	6.40
Rice	7,710.37	Flour	.48
		Miscellaneous	31,263.55
		Total	7,297,836.07

Compared with the year 1909, there were increases in exports as follows: Coffee, $538,056.40; silver, $207,489.92; indigo, $57,596.69; sugar, $156,179.87; hides, $24,829.11; rubber, $18,408.26; and decreases in gold bars, $87,190.77; balsam, $22,561.12; leaf tobacco, $6,331.40; and rice, $5,469.54.

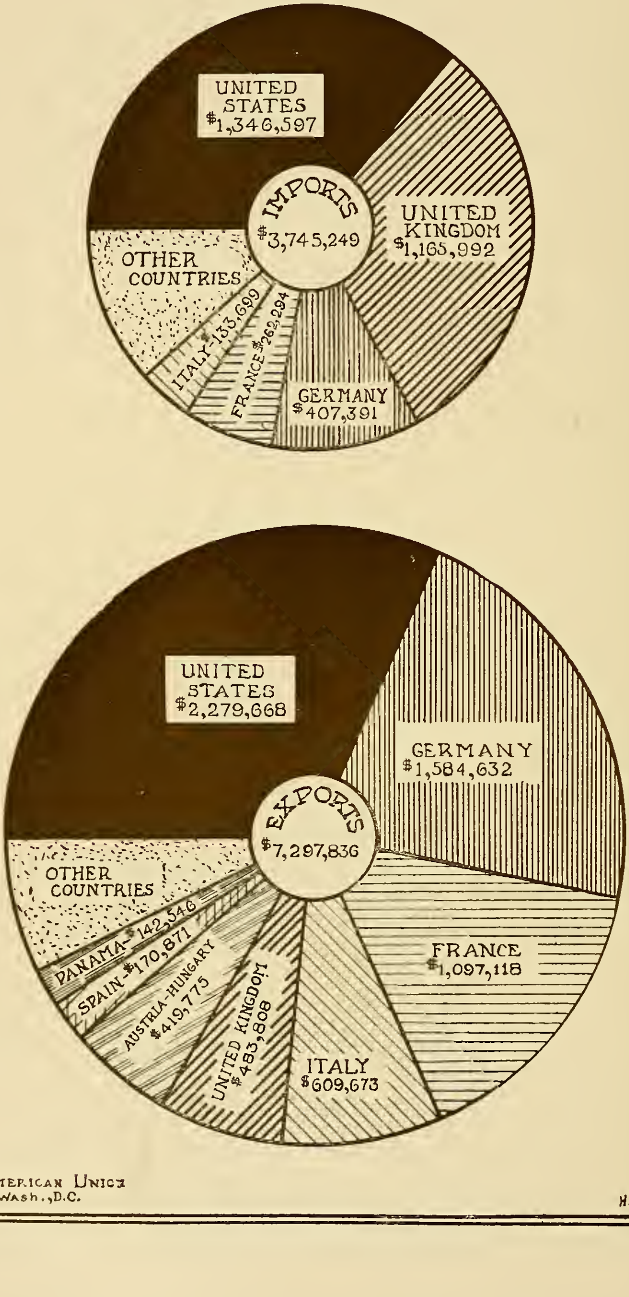
PRODUCTS AND INDUSTRIES.

Agriculture and mining contribute most largely to the wealth of the Republic, and, as would be expected from a country so thickly populated, the people themselves are

SALVADOR

— COMMERCE — 1910 —

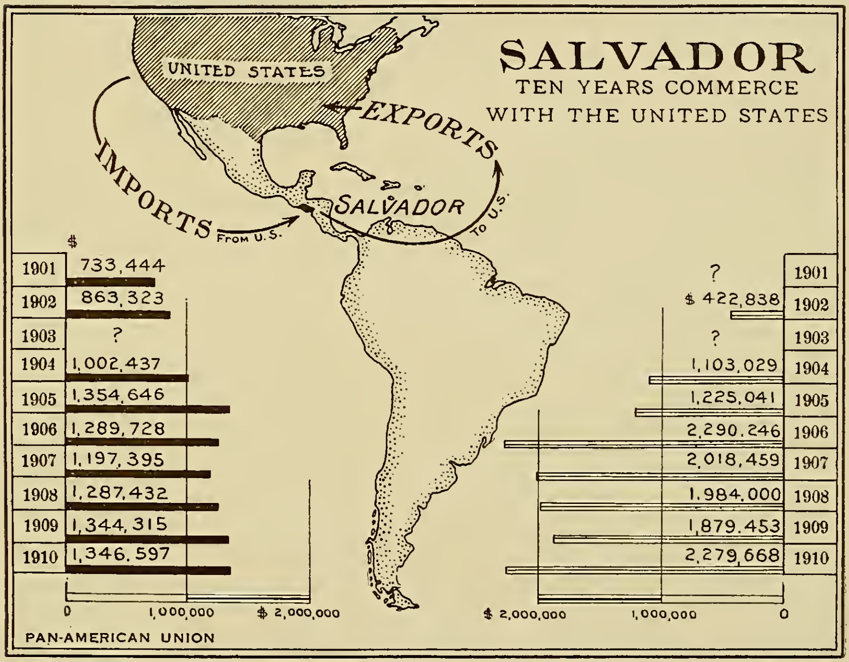
$11,043,085



Pan American Union
Wash., D.C.

H. M. Rivero

industrious and thrifty, and while making a livelihood for themselves from their own soil and contributing from their labor to those products that are exported, they at the same time have developed many native industries to satisfy their social and domestic wants. For instance, within the country are made hammocks and many articles requiring weaving from fibers; the manufacture of textiles is successfully conducted, especially beautiful silk goods being produced from native looms. Saddles, shoes, and other leather goods are made, cigars and cigarettes from native tobacco, and useful iron instruments. These do not offer complete competition with foreign-made articles, because the latter are of different grade and are in demand by different classes of society. The great products of the country are the mines in both the east and west, both silver and gold being exported; coffee, which leads in the amount and value among national exports; indigo, sugar, rubber, and hides, which are staples; and the peculiar product so useful in pharmacology and kindred arts, the so-called balsam of Peru.



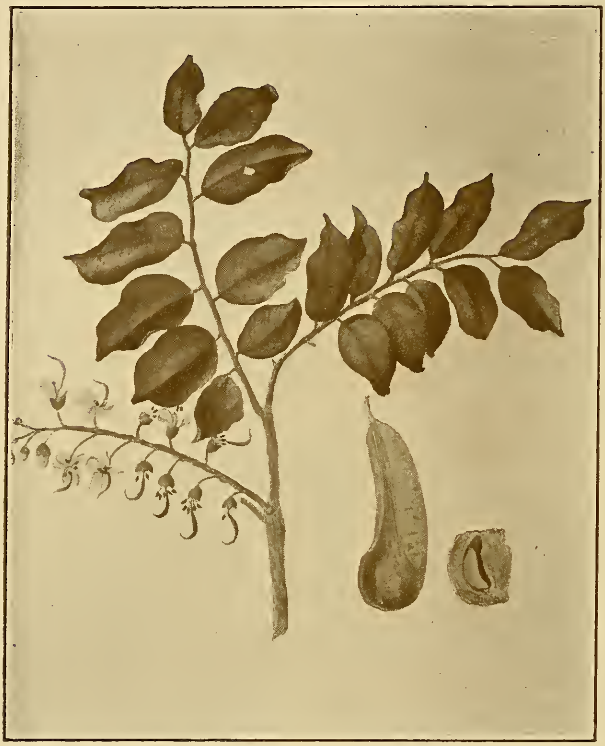
BALSAM OF PERU really comes from Salvador, and has always been the great natural product of the country. Its name is a tradition from the early habit in vogue during Spanish times of shipping American colonial things across the Isthmus of Panama, where they became mixed and confused with those with greater fame which came from the coast of Peru. As a matter of fact, in only a limited strip of territory along the Pacific Ocean is the balsam tree found, although soil and climate is suitable for it in other parts of America.

The indigenous inhabitants of this coast discovered the virtues of the juice of the tree, and when the Spanish conquerors learned of it they at once appreciated its value, and it has ever since retained a deserved pupularity. Cocoa balsam is another name by which it was formerly known, as shipments were at one time made in cocoanuts, but its designation should be *Balsam salvadorense*, as indicative of its origin. The tree belongs to the family of leguminosæ, and is related to peas, beans, and acacias. Its botanical title is *myrospernum* or *myroxilon pereiræ*.

The balsam tree is one of the most beautiful of the tropical forest. It may be found in groups, but usually it grows singly, scattered among neighbors of other families.

It is a stout tree, about 1 meter (40 inches) in diameter and 25 to 35 meters (80 to 115 feet) high. The outer bark is white, the inner dark red, and the wood is very hard and durable, making good material for furniture. The blossoms are white, the fruit a pale yellow, with only one seed as a rule. Plantations may be and have been formed, but generally dependence for a supply of balsam is placed upon the wild trees, because the mature growth is not reached before the twenty-fifth year, and a plantation therefore is not commercially profitable for the first generation.

Balsam is collected by balsameros, natives who live in the woods and who from early youth have cultivated the skill necessary to incise the tree for the extraction of the juice in a manner to do least harm to the tree and at the same time to obtain the best results. The summer or dry season (beginning about January in Salvador and ending about May) is preferred, as sap flows freer then. The tree is first scratched (en luna tierna, during the young moon, for the balsamero is superstitious) with a blunt instrument just enough to detach the outer bark and to expose the inner; from this there slowly exudes, after a few days, the mature sap (jugo). This juice is collected on pieces of cloth attached to the wound or window (ventana) as it is called, and when saturated they are replaced by new ones. The flow, stimulated from time to time, continues for weeks, and if care is exercised the loss seems to work no harm to the tree.



THE LEAVES, BLOSSOMS, AND FRUIT OF A BALSAM TREE.

The leaves and blossoms of the tree are very attractive features in the woods of Salvador, if one happens to visit them during the flowering season. The fruit is inconspicuous, as it is rather small, yellow in color, and has, as a rule, only one seed. They may be used in planting, as nature intended, but the shoots growing at random at the base of the parent trunk are the best source of supply for future cultivation.

A BALSAM TREE IN A FOREST IN SALVADOR.

The balsam tree is one of the beauties of a tropic forest. It has few branches on its trunk, but at the top it spreads out umbrageously at from 50 to 100 feet above the ground. The blossoms are white, coming out late in the dry season. Besides its value as a producer of balsam, the tree, being long lived and of slow growth, is dense and hard, its wood being serviceable for furniture and construction work.

All the pieces of cloth (trapos) are then collected, and placed in a kettle of boiling water for half an hour; the impurities that have risen to the surface are then skimmed off and the cloths immediately squeezed vigorously so as to press out the balsam. This is collected in a mass, and is the crude balsam as delivered to the local dealer. Clarified by the merchant who has purchased it, by slow heating in a caldron to remove other impurities, the balsam is finally poured into rectangular tins each containing about 55 pounds, and in this state is shipped to its final destination abroad. Adulterations and less evident impurities must be detected and expelled before balsam, as known in pharmacology and the arts, is ready for scientific or commercial use.

Only the inner bark of the tree yields true balsam, and then only from the mature tree. Gums, resins, and essential oils are products of other parts of it. Many devices have been proposed and even tried for a more economical method of collecting balsam, and undoubtedly some improvement over the traditional habit of the natives is probable, but until the whole field is systematically studied the simple methods employed to-day can not be displaced.

Salvador exports annually about 130,000 pounds of balsam, half of it going to Germany which is the principal market and sets the price, a small amount (7,500 pounds) to France, and the rest to the United States. In 1910 the amount exported was 133,247 pounds, which indicates that production is increasing. This was valued, when exported, at $81,754, but to the trade the price fluctuates between 12 and 22 marks per kilogram ($2.86 to $5.24 gold for 2.20 pounds).

Balsam of Salvador is a viscous, grayish red mass, of pleasant vanilla-like odor and bitter taste. It is rather unstable, and must be kept in the dark or made at once into such compounds as can be preserved. Its original use was altogether in surgery, and it has a wonderfully stimulating property on wounds, while being also naturally antiseptic. It is beneficial in some skin diseases, and recently the cinnamic acid, one of its chief ingredients, has proved of service in tuberculosis. As a well-tried drug it will always have a place.

RAILWAYS AND INTERIOR WATERWAYS.

The railways in operation during 1910 comprised 156 kilometers (97 miles), all of narrow gauge. The longest railway in the country runs from the port of Acajutla on the Pacific coast to the city of San Salvador, the capital of the Republic, a distance of 105 kilometers (65 miles). This line, which has 14 stations from terminal to terminal, is the most important railway of the nation. A branch line, 40 kilometers (25 miles) in length, connects Santa Ana, the second city of the Republic, with Sitio del Niño. A short railway runs from the city of San Salvador to Santa Tecla, a distance of 18 kilometers (11 miles). A project for the extension of this line from Santa Tecla to the port of La Libertad is now being considered by the National Assembly. The operation of the railway from La Ceiba to Ateos, a distance of 20 miles, has been temporarily abandoned. Of the branch line between San Miguel and La Union, 10 kilometers (6.21 miles) were completed at the end of 1910. At the end of May, 1911, there were completed 25 kilometers (15.5 miles), and the work is being pushed forward rapidly on this line, which will have a total length of 62 kilometers (38 miles).

Among the numerous rivers of Salvador the most important are the Lempa, the Paz, and the San Miguel, the first mentioned flowing through the entire territory of the Republic, but all navigable only for small craft.

A number of picturesque lakes are in the country, Lake Guijar, the largest, being 15 miles long and 5 miles wide. Lake Ilopango is 9 miles long and 3 miles wide. All are navigable for small vessels of light draft. Lake Coatepeque is a popular resort, many cottages there being owned by prominent residents of the Republic.

THE PRESS OF EL SALVADOR.

Don Juan Mora Fernandez, the first official of the State of Costa Rica, issued, as the Republic was founded, a decree dated November 25, 1824, advising the people to establish a periodical publication, as by that means the principles of good government could be best extended. The influence of this decree was widespread and aided considerably in arousing the ambitions of all sections of this part of Latin America. The result has been illustrated in the article on Costa Rica.

In El Salvador, the first periodical appeared in July, 1824, under the name Semanario Politico Mercantil. This was followed early in 1827 by El Centinela, and on April 2, 1827, by the Gaceta del Gobierno del Estado del Salvador. From 1840, when El Correo Semanario and La Miscelánea, both in the town of Cojutepeque, were established, a number of provincial and national papers were founded: El Anotador in San Salvador, in 1845; El Progreso in Cojutepeque, 1850; in the same place, in 1856, El Cometa, and others of short life and but local remembrance.

LAKE ILOPANGO, REPUBLIC OF SALVADOR.

One of the most beautiful bodies of water in Central America. It is a simple fashionable resort for the people of the capital, who ride out for the " week-end " pleasures. A gasoline launch crosses the lake every other day or so for connection with the highway to the city of San Vicente. The road is splendidly constructed, perfectly adapted for the automobile, and strikes through the heart of the Republic toward the eastern section.

The first daily papers in the Republic were La America Central and El Universo, both established in the capital in 1871. Later came El Diario del Comercio, in 1880; El Correo Nacional, in 1891; and El Aviso, in 1897, but they have passed and have left no continuous successors.

To-day the oldest newspaper in Salvador, and by many asserted to be the best daily in Central America, is the Diario del Salvador, in its twenty-fourth year and founded, therefore, in 1887. Other newspapers, daily or less frequently appearing, are published in the capital, San Salvador, the number last given being 12, including those devoted to science, art, literature, industry, and commerce. The chief cities of the interior have regular papers as well.

The newspapers of Salvador are, in general, rather of the Spanish than of the United States or British type; the best of them measure 22 by 24 inches, while the smaller ones are of the size so popular with weeklies in the United States. Four pages—that is, two sheets—is the rule, although supplements may be published, comparable to separate sheets added to contain more news. Eight columns are on the larger pages, four to five on the smaller. The first page seldom carries advertisements, but is altogether devoted to news, cable messages, items of a national or local character, and in some instances a résumé of the day's doings. On the remaining pages letters, contributed articles, anecdotes, and social events are given, mingled with advertisements.

The circulation varies with the size of the city in which the paper is published. From 1,000 to 3,000 is the average in interior places, from 5,000 to 10,000 or more than that in the capital. The advertisements are not, however, limited to this number of readers, because each newspaper will be in the hands of several persons, and it may be assumed that an advertisement will be noticed by ten times as many people as the circulation indicates. Advertising rates are quoted by the column inch per insertion. This is on the average about 10 cents gold. For display advertisements on the first page the cost is more, and for continuous insertion it can be brought to considerably less by contract.

BALSAM PACKAGES ON THE WAY TO MARKET.

URUGUAY

The Oriental Republic of Uruguay lies between the Atlantic Ocean, the Rio de la Plata (River Plate), Brazil, and the Argentine Republic. It is separated from Brazil by the Rivers Cuareim and Yaguaron and by Lake Merim, and from the Argentine Republic by the Rio de la Plata and the Uruguay River. Uruguay has an area of 72,210 square miles and is the smallest Republic in South America. It has a population estimated at 1,112,000, which, however, may be somewhat modified by the census just completed. The most notable feature of Uruguay is its extent of long rolling plains, comprising almost the entire length of the country, occasionally broken by low mountain ranges and copiously watered by numerous streams. It is naturally suited for both sheep and cattle, the raising of which is its principal industry. Agriculture is also practiced to a considerable extent, nearly all of the cereals being grown. In the forests are found a number of excellent cabinet and other woods noted for their beauty and durability, and some mining is carried on.

COAT OF ARMS OF URUGUAY.

The constitution of Uruguay was promulgated on July 18, 1830, and, with some slight amendments, is still in force. The Senate and House of Representatives compose the general assembly, in which all legislative power is vested, and meet annually from February 15 to June 15. Representatives, the number of whom varies with the population, are elected directly by popular vote in the proportion of 1 for every 3,000 inhabitants or fraction exceeding 2,000, and for a term of three years. The Senate consists of 19 members, who are elected indirectly for a term of six years, one for each Department. The Senate is renewed by thirds every two years. Every citizen over 20 years of age, who is physically and mentally able to do so, is entitled to vote. A permanent committee, composed of two senators and five representatives, takes the place of congress during recess, whose duty it is to assist and advise the President on all matters legislative, and to act for the general assembly. The President is chosen by the general assembly for a term of four years and may not be reelected for the term immediately following his own. In case of the President's disability or death, the presiding officer of the Senate assumes the Presidency, as there is no Vice President in Uruguay. The salary of the President is $36,000 per annum.

Following are the President and Cabinet of the Republic. A law of congress passed on March 3, 1911, reorganized the Cabinet, adding two new departments, making seven in all, with a secretary at the head of each. The secretaries are appointed by the President, but are responsible to both the President and to congress.

President: Sr. José Batlle y Ordónez. (Inaugurated March 1, 1911.)

Minister of Interior and Worship: Dr. Pedro Manini y Ríos.

Minister of Public Works: Sr. Victor Soudriers.

Minister of Finance: Sr. José Serrato.

Minister of Industries, Labor and Communications: Dr. Eduardo Acevedo.

Minister of Justice and Public Instruction: Dr. Juan Blengio Rocca.

Minister of War and Marine: Gen. Juan Bernassa y Jérez.

Minister of Foreign Affairs: Dr. José Romeu.

Under the Department of Interior and Worship (Ministerio del Interior y Culto) is the administration of the districts and municipalities. Matters affecting general elections, police and fire regulations, public health, charities, post offices and telegraphs, also the publication of the Diario Oficial come within the jurisdiction of this division. The churches and clergy of the Roman Catholic faith are also responsible to the section of this department devoted to public worship.

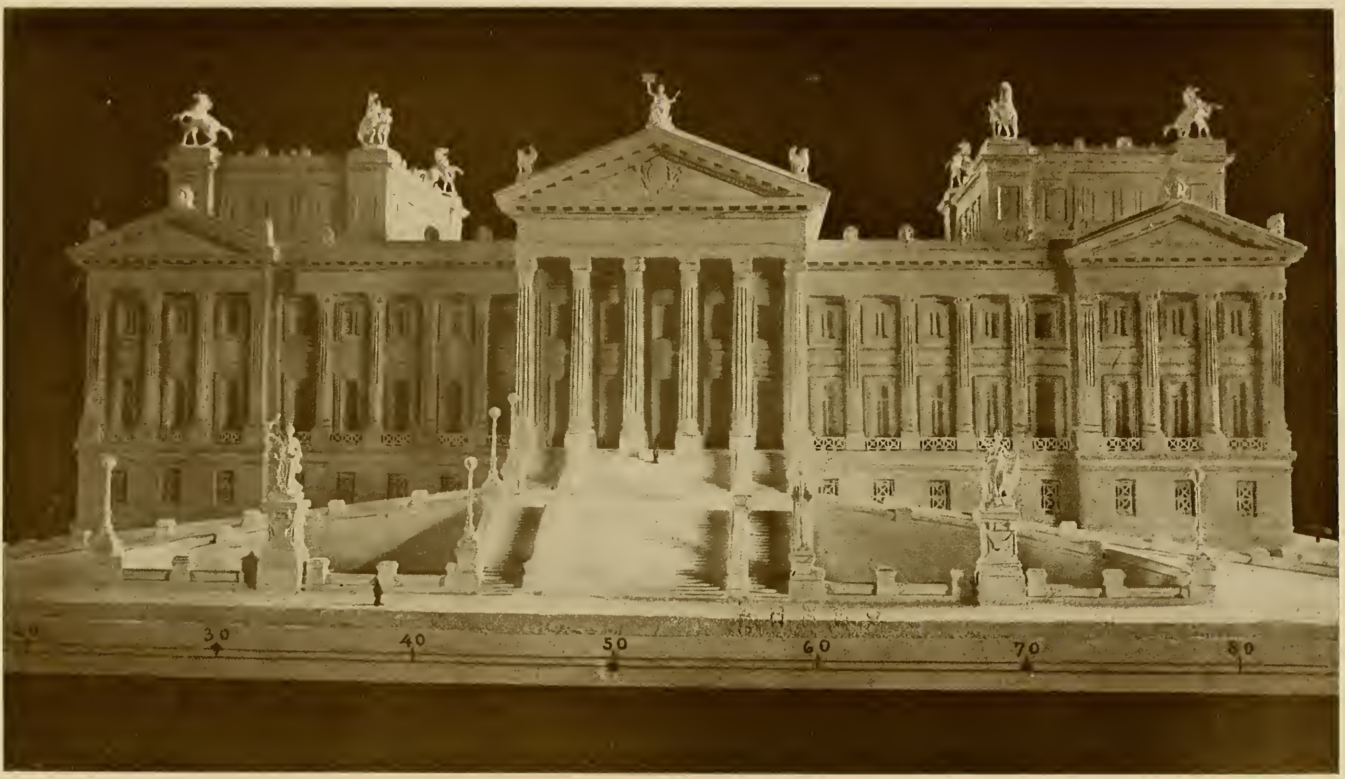
PRESIDENT JOSÉ BATLLE Y ORDOÑEZ.

The Department of Public Works (Ministerio de Obras Públicas) is charged with the supervision of railroads, ports, harbors, the maintenance and construction of public buildings, roads, bridges, and highways.

The Department of Finance (Ministerio de Hacienda), in addition to collecting and disbursing the national funds, has under its control the customhouses, pension office, national and private banks, and is also charged with the duty of preparing and issuing commercial statistics.

The Department of Industries, Labor and Communications (Ministerio de Industrias, Trabajo y Comunicaciones) is intrusted with the regulation and development of industries and natural resources in the country, of labor, and of means of communication and transportation. This division embraces the inspection of cattle and the supervision of kindred industries; patent and trade-mark regulations; weights and measures; bureau of labor; office of accounting and control of railroads.

To the Department of Justice and Public Instruction (Ministerio de Justicia é Instrucción Pública) are intrusted the regulation and



THE CAPITOL AT MONTEVIDEO, URUGUAY.

The building is also named the Palacio Legislativo. It is reserved for the particular use of the national legislative bodies, the Senate and Chamber of Deputies. Other apartments are set aside, however, for the business of administration, for Cabinet Ministers, and a Library. There is also a grand reception room (Salon de Fiestas), in which public receptions will be held. The corner stone was laid by President Batlle in 1906, and will soon be ready for occupancy.

control of the courts and all matters pertaining to the administration of justice in the country. The educational section of this department is charged with the supervision of all schools, public and private, together with the institutions of special and higher instruction.

The Department of War and Marine (Ministerio de Guerra y Marina) has charge of the maintenance and instruction of the regular army and navy and the establishment of such military and naval academies as it deems expedient.

To the Department of Foreign Affairs (Ministerio de Relaciones Exteriores) is intrusted the administration of the diplomatic and consular divisions of the Government, as well as all negotiations with foreign nations. It is also the bureau for the exchange of publications and the general statistical office.

The judiciary is composed of a supreme court, two courts of appeal, and a number of lower courts. The justices of the supreme court are elected by the national assembly, while the judges of the other courts are appointed by the supreme court.

According to the message of the President of Uruguay (February, 1911) the post offices in the country have been increased to 1,018, and telegraph and telephone stations to 54. In addition, Uruguay has done very much to extend its wireless service by establishing a large station at Montevideo capable of communicating with every port in the country and with a range of 1,000 kilometers at sea; also by a service at the military stations in Rivera and Paso de los Toros and in several lighthouses.

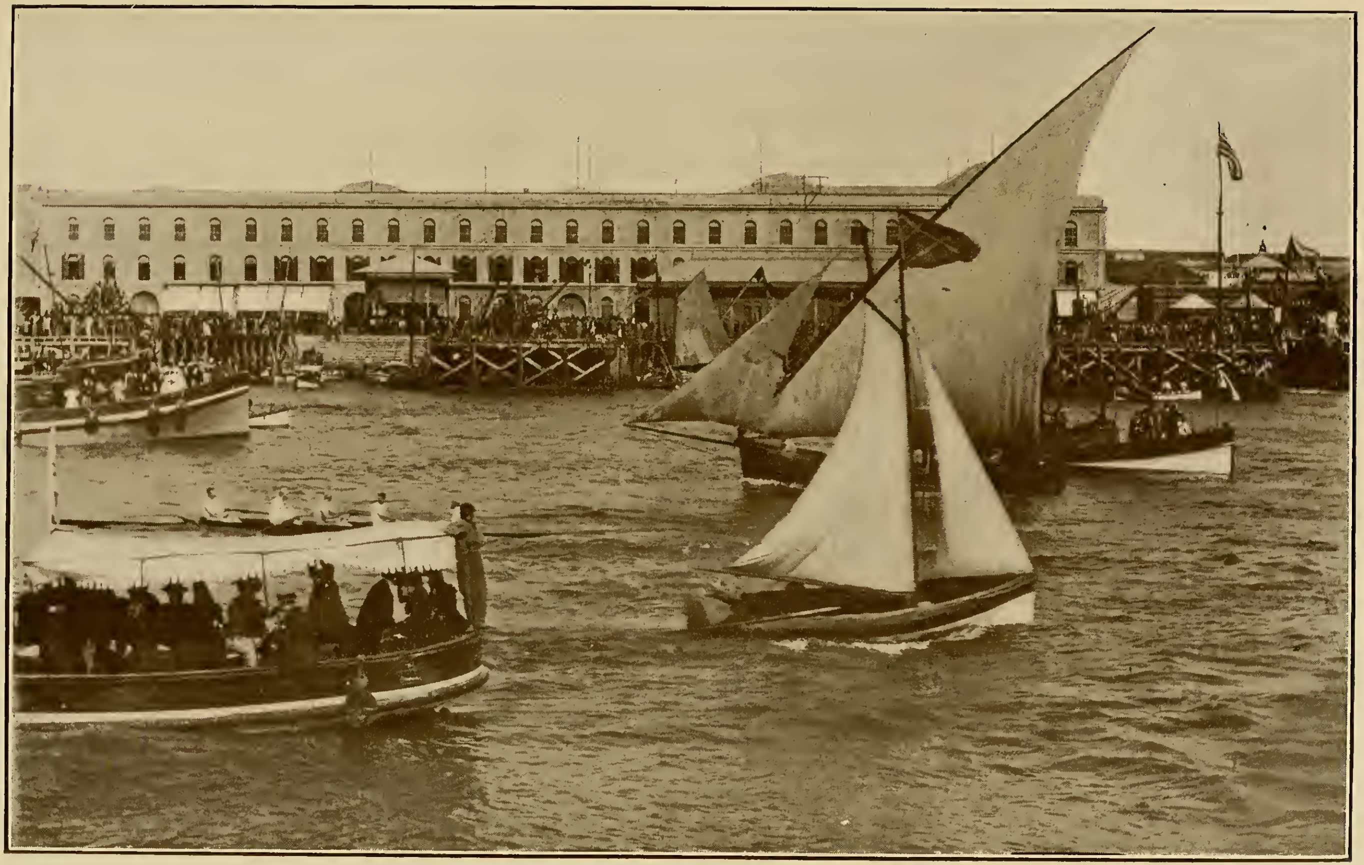
The personnel of the army numbers 7,500 men and 600 officers. The navy consists of 12 ships, 60 officers, and 600 men. Four additional ships are now in process of construction.

The Republic is divided into 19 Departments, which are subdivided into sections and districts. The representative of the Executive Power in the Department is the *jefe politico y de policía,* appointed by the President of the Republic. There is, besides, in each Department, an *intendente municipal,* assisted by a council, the members of which are elected by direct vote.

URUGUAY IN 1910

In the message of the President of the Republic, presented to congress on February 15, 1911, mention was made of the political disturbances which occurred in the country during the early part of 1910, but no permanent harm resulted therefrom, and when they were finally quieted the usual peace and progress characteristic of Uruguay for the last several years continued unabated.

In foreign relations the nation has the satisfaction of reporting complete harmony, and the most cordial friendship has been main-



THE CUSTOMHOUSE AT MONTEVIDEO, URUGUAY.

The foreign commerce of the Republic in 1910 exceeded $85,000,000, the larger portion of which passed through this customhouse. The semicircular bay of Montevideo is 6 miles in circumference and large enough to accommodate a great number of ocean steamers at one time. Recently it has been dredged, breakwaters have been built, quays constructed, and other vast improvements have been made. The work is still incomplete, but it is so far advanced as to permit the use of the harbor by the largest vessels, an advantage which is bringing a constantly increasing tonnage to Montevideo.

tained with all Governments. The President-elect of Argentina visited Montevideo during the year and was received by the people with great respect and rejoicing. The ratification of a treaty between Brazil and Uruguay concerning the boundary in Lake Merin and the river Yaguarón was concluded in May. Extraordinary missions were sent to American and European countries during the year, and the Government was represented at many international gatherings and congresses held in various parts of the world.

At home preparations were made for one of the most important international meetings, that of the First Continental (South American) Postal Congress, which took place in Montevideo early in 1911. The results will be of great value to all the Republics of South America, as they agreed on many means for facilitating postal communication between themselves.

In commercial matters the country reached in foreign commerce the highest point in its history. This amounted, both exports and imports, to over $86,100,000 and indicates how prosperous it was in both branches of trade. The balance of trade was in favor of the Republic.

Financially the nation has met all its obligations and has in some cases been able to readjust the basis of its loans. The year was marked by considerable progress in national public works, and, although some of these were begun in the early part of the administration of President Williman, much was accomplished in 1910. National credit remained unimpaired, as is proved by the fact that the Government securities held abroad (5 per cent bonds) continued to be quoted at par.

During the year the railways have been increased to the amount of 165 kilometers (103 miles). The freight, passenger, and baggage business on the railways in general was greatly increased, and this of itself is a trustworthy index of the progress and prosperity of the country. The Government has approved of a plan to connect through the frontier town of Rivera the system in Uruguay with that in Brazil, and while some construction in the latter Republic is still necessary and a change of gauge at some place to handle traffic, yet this will soon be accomplished and a rapid through connection between Montevideo and Rio de Janeiro established.

The condition of both army and navy improved in 1910, and the magnificent new building for instruction in these services was opened just as the year ended. The new national university, erected in the capital city of Montevideo and practically finished that year, was inaugurated on January 22, 1911, with befitting ceremonies. It covers two squares of ground and cost about $2,000,000. This adds one more to the long list of eminent educational institutions in South America. It is estimated that the total school attendance has increased during the year to 117,000, and with the 210 additional schools opened during the year the total of building for public instruction was raised to 1,263. Part of the Government program for the improvement of education is the sending abroad commissions to study methods in other countries. One such commission has just been dispatched to Europe and the United States to study modern agriculture in farms, dairies, fruit culture, and the application of machinery. The members of it, at the head of which is Dr. Carlos Praderi, are authorized to report on agricultural conditions, and also to purchase machinery that may be of value for their future demonstrations, and live stock for introduction of good breeds on their country's estancias.

FINANCE.

In the message of President Claudio Williman delivered at the opening of the general assembly on February 15, 1911, it is stated that there was a surplus in revenues over expenditures for the year 1910 of 2,255,032.15 pesos. Estimating the peso at $1.04 this would represent in United States gold $2,345,233.44. There were surpluses in each of the four years of Dr. Williman's administration which, including the surplus mentioned above, amount to 8,156,361.92 pesos. This money has been expended in public improvements, principally in transit and sanitary works and for the betterment of the national industries.

The message does not give an itemized statement of the receipts and expenditures, nor the totals thereof, but the following are given as among the principal receipts:

	Pesos.
From customhouses	15, 245, 563. 94
Direct taxes	6, 031, 955. 60
Internal and consumption taxes	2, 247, 165. 66
Post and telegraphs	653, 551. 00
Consular revenues	451, 672. 40

The customs revenues for the last 10 years have increased nearly 60 per cent from 9,654,797.43 pesos in 1901. The increase in the last year was 1,180,592.84 pesos.

The internal and consumption taxes for the preceding year yielded 2,127,290.85 pesos, showing an increase of nearly 100,000 pesos.

The principal direct taxes were as follows:	Pesos.
Property tax	2, 895, 255. 23
Transit and public works	133, 321. 33
Business licenses	1, 454, 012. 70
Stamped paper	555, 355. 07
Revenue stamps	352, 884. 67
Inheritances	393, 074. 03
Dog licenses	53, 116. 00
Public instruction special tax	3, 564. 00

The principal internal and consumption taxes were:

Alcohol	437, 274. 20
Beer	132, 140. 71
Matches	276, 300. 00
Tobacco, etc	626, 485. 56

	Pesos.
Internal taxes, law of 1901	449, 342. 36
Insurance tax	36, 521. 04
Provision tax	270, 717. 80

President Williman states that in the four years of his administration the following amount has been expended on public works:

	Pesos.
Construction of the Port of Montevideo	7, 350, 013. 28
Expropriations for the Port of Montevideo	452, 855. 46
Unforeseen expenses and complementary works (laws 1908 and 1909).	531, 352. 98
Sanitary works and sundry contracts	428, 750. 02
Construction of cart roads, boulevards, etc	1, 817, 007. 00
Construction of bridges and causeways	1, 235, 281. 00
Construction and repair of buildings, and expropriations of property and lands	4, 798, 728. 00
Construction of ports (excepting that of Montevideo) and construction and repair of moles and jetties	466, 083. 00
Total	17, 080, 070. 74

PUBLIC DEBT.

According to a report issued by Señor Don Miguel V. Martinez, Director of the Office of Public Credit, on December 31, 1910, the public debt on December 31, 1909 amounted to 135,805,784.05 pesos, as shown by the following table:

Debt.	Interest.	Sinking fund.	Total.
INTERNAL DEBT.	*Per cent.*	*Per cent.*	*Pesos.*
Guaranteed debt	4	1	2, 974, 300. 00
Unified interior debt	4	1	2, 858, 050. 00
Liquidation debt	....	....	202, 874. 95
Redemption debt, second series	....	4	1, 741, 891. 24
Guaranteed bonds of the Uruguay & Eastern R. R	5	2	236, 785. 86
EXTERNAL DEBT.			
Uruguay consolidated debt	3½	1	83, 941, 154. 00
Uruguay 5 per cent loan of 1896	5	1	5, 493, 172. 00
Five per cent conversion loan of 1905	5	1	29, 828, 157. 25
Public-works loan of 1909	5	1	5, 969, 398. 75
INTERNATIONAL DEBT.			
Brazilian loan	5	1	2, 560, 000. 00
Total	....	....	135, 805, 784. 05

During the year 1910 there were issued additional obligations and prior obligations, were retired as follows:

	Pesos.	Pesos.
Debt as stated above on December 31, 1909		135, 805, 784. 05
New issues:		
Liquidation debt, second series	28, 036. 23	
Five per cent conversion loan of 1905	1, 003, 370. 00	
		1, 031, 406. 23
		136, 837, 190. 28

Redemption—purchase of bonds:	Pesos.	Pesos.
Guaranteed debt	81,100.00	
Unified interior debt	292,050.00	
Redemption debt, second series	223,400.00	
Guaranteed bonds of the Uruguayan Eastern Railway	5,200.00	
Uruguayan consolidated debt	1,274,170.00	
Uruguay 5 per cent loan of 1896	197,776.00	
Five per cent conversion loan of 1905	387,826.75	
Public Works loan of 1909	62,291.00	
Brazilian loan	84,500.00	
Redemptions		2,608,313.75
Debt on December 31, 1910		134,228,876.53
Equivalent in United States gold (peso = $1.04)		$139,598,031.59

From this total it can be seen that the debt was reduced during the year by the net sum of 1,576,907.52 pesos.

On December 31, 1906, the public debt amounted to 127,275,933.94 pesos. During Dr. Williman's four years of administration there were issued additional obligations as follows:

	Pesos.
Redemption debt, second series	272,703.48
Bonds of the Uruguayan Eastern Ry	241,385.86
Five per cent conversion loan of 1905	10,887,870.00
Public works loan, 1909	5,999,984.75
	17,401,946.09

During the same period the redemptions were as follows:

Internal debt	2,503,500.00
External debt	7,570,153.50
International debt	375,350.00
	10,449,003.50
Increase in debt for four years	6,952,942.59

FOREIGN COMMERCE.

The foreign commerce of Uruguay, according to a statement published in the Bulletin Bi-Mensuel de la Chambre de Commerce Française of Montevideo, of March 24, 1911, amounted for the year 1910, to 82,817,145 pesos, of which 41,150,679 pesos were imports and 41,666,466 pesos were exports. Estimating the Uruguayan gold peso at $1.04 United States gold, this would give a value to the foreign trade of $42,796,706.16 for the imports, and $43,333,124.64 for the exports, or a total of $86,129,830.80.

In the message of President Williman to the general assembly on February 15, 1911, the total commerce of exports and imports is given as 82,890,521 pesos, and in the report of the United States Consul Frederic W. Goding, made on April 18, 1911, the total trade is given in United States currency at $85,708,799. In neither Dr. Williman's message nor in Mr. Goding's report are the values of imports and exports given separately.

IMPORTS AND EXPORTS.

The imports and exports for the last three years, according to the Bulletin Bi-Mensuel, were as follows:

	Imports.	Exports.	Total.
	Pesos.	*Pesos.*	*Pesos.*
1908	37,456,161	40,296,367	77,752,528
1909	39,156,764	45,103,422	82,260,186
1910	41,150,679	41,666,466	82,817,145

There is no official publication as yet of the details of imports and exports for the year 1910 either in value or quantities. The only details available are as to quantities, as given by Mr. Goding in his report referred to, which are as follows:

Article.	Quantity.	Article.	Quantity.
IMPORTS.	*Metric tons.*	EXPORTS.	*Metric tons.*
Charcoal	15,559	Coal	11,702
Coal	518,854	Food and drinks	13,304
Food and drinks	113,196	General merchandise	74,283
General merchandise	200,011	Machinery	2,685
Machinery	10,594	Oils, illuminating	2,961
Oils, illuminating	26.808	Salt	15,900
Salt	57,569	Other articles	12,872
Wood	7.428		
Other articles	21,325		
Construction material.		*Construction material.*	
Cement	44,250	Cement	2,382
Iron and steel	49,667	Iron and steel	1,441
Lumber	110,793	Lumber	5,462
Tile, floor and paving	10,802	Tile, floor and paving	406
Other materials	20,413	Other materials	2,963
Live-stock products.		*Live-stock products.*	
Beef, jerked	21,970	Beef, jerked	68,874
Hides, dry	2,661	Beef, frozen	15,301
Hides, wet	3,054	Bones and ash	11,789
Horsehair	114	Hides, dry	9,012
Sheepskins	1,064	Hides, wet	22,180
Tallow, grease, etc	3,528	Horsehair	457
Wool	3,917	Sheepskins	10,134
Other products	2,864	Tallow, grease, etc	17,988
		Tongues, beef, preserved	1,529
		Wool	42,086
		Other products	5.941
Agricultural products.		*Agricultural products.*	
Corn	2,875	Corn	3,911
Linseed	914	Bran	1.817
Wheat	31.749	Flour	8,666
Other products	7,812	Linseed	1,531
		Wheat	1,121
		Other products	7,072
	1,289,791		375.767

In addition to the foregoing table Mr. Goding supplies the following information as to imports by quantities from the United States in 1910, which he states to be fragmentary:

		Quantity.			Quantity.
Brandy	barrels	367	Liquors	cases	8
Candy	cases	50	Lumber	superficial feet	60,725,000
Cartridges	do	120	Paper	rolls	238
Cocoa	bags	50	Rum	barrels	1,167
Firecrackers	case	600	Steel wire	coils	5
Kerosene	gallons	5,934,000	Watches (value, $465)		300
Tobacco	cases	1			

"The importations of lumber from the United States during the year ended June 30, 1910, as compared with those during the six years previous, were (superficial feet):

Year.	White pine.	Yellow pine.	Spruce.	Total.
1904	6,224,000	20,174,000	4,330,000	30,728,000
1905	2,805,000	13,946,000	3,002,000	19,753,000
1906	8,688,000	18,989,000	7,237,000	34,914,000
1907	8,567,000	21,370,000	4,500,000	34,437.000
1908	6,020,000	28,196,000	6,339,000	40,555,000
1909	4,818,000	18,492,000	4,473,000	27,783,000
1910	8,023,000	42,576,000	10,126,000	60,725,000

While on June 30, 1910, there was on hand the following stock: 3,491,000 superficial feet of white pine, 21,780,000 feet of yellow pine, and 5,324,000 feet of spruce. The importation of lumber from Brazil for the same period was less than 1,000,000 feet, and from Australia were some irregular cargoes of railway sleepers."

TRADE OF 1908 AND 1909.

The latest details of imports and exports, given in values, by countries and articles, are for the year 1908, for imports, and 1909 for exports, and are from the report of United States Vice Consul F. Landon Goding, of Montevideo, dated January 13, 1911.

The imports for the year 1908 by countries were as follows:

United Kingdom	$12,125,681.81	Australia	$350,579.77
Germany	6,438,560.83	Paraguay	226,974.37
France	3,765,166.24	Cuba	148,699.54
United States	3,457,194.56	Chile	139,992.22
Italy	3,172,133.12	Netherlands	135,036.26
Argentina	2,553,978.96	Austria-Hungary	29,191.15
Belgium	2,277,148.14	Portugal	22,618.75
Spain	2,010,442.39		
Brazil	1,866,259.36	Total	38,729,670.47

[Correct addition $38,719,657.47. The error $10,013 is most probably in the figures for the countries and not in the total.]

The imports for the same year by classes were as follows:

Textiles	$8,206,749.43
Food products	7,686,376.52
Stones, earths, glassware, and pottery	4,060,328.34
Special importations:	
Industrial establishments, national institutions, etc	3,989,797.57
Iron and steel manufactures	3,596,545.02
Beverages	2,278,067.44
Woods, lumber, and manufactures	1,933,513.82
Chemicals and drugs	1,178,928.54
Special importations—Continued.	
Oils	$1,022,880.36
Tobacco	896,077.84
Paper and manufactures	800,736.84
Metals and manufactures other than iron and steel	577,507.61
Paints and dyes	335,763.58
Leather	265,338.88
Live stock	227,792.27
Miscellaneous	1,673,266.41
Total	38,729,670.47

EXPORTS.

The exports for the year 1909, by countries were as follows:

France	$9, 141, 991. 05	Portugal	$189, 770. 02
Argentina	8, 473, 648. 61	Porto Rico	77, 552. 07
Germany	6, 900, 280. 09	Russia	45, 868. 24
Brazil	6, 700, 582. 63	Trinidad	13, 006. 69
Belgium	4, 156, 470. 10	Paraguay	11, 606. 65
United States	3, 890, 365. 03	Barbadoes	7, 840. 82
United Kingdom	2, 771, 832. 42	Canary Islands	7, 262. 81
Italy	1, 461, 465. 94	Australia	5, 997. 20
Cuba	1, 081, 976. 57	Falkland Islands	4, 682. 98
Spain	569, 713. 32	South Africa	775. 50
Austria-Hungary	544, 608. 83		
Chile	193, 013. 67	Total	46, 250, 311. 24

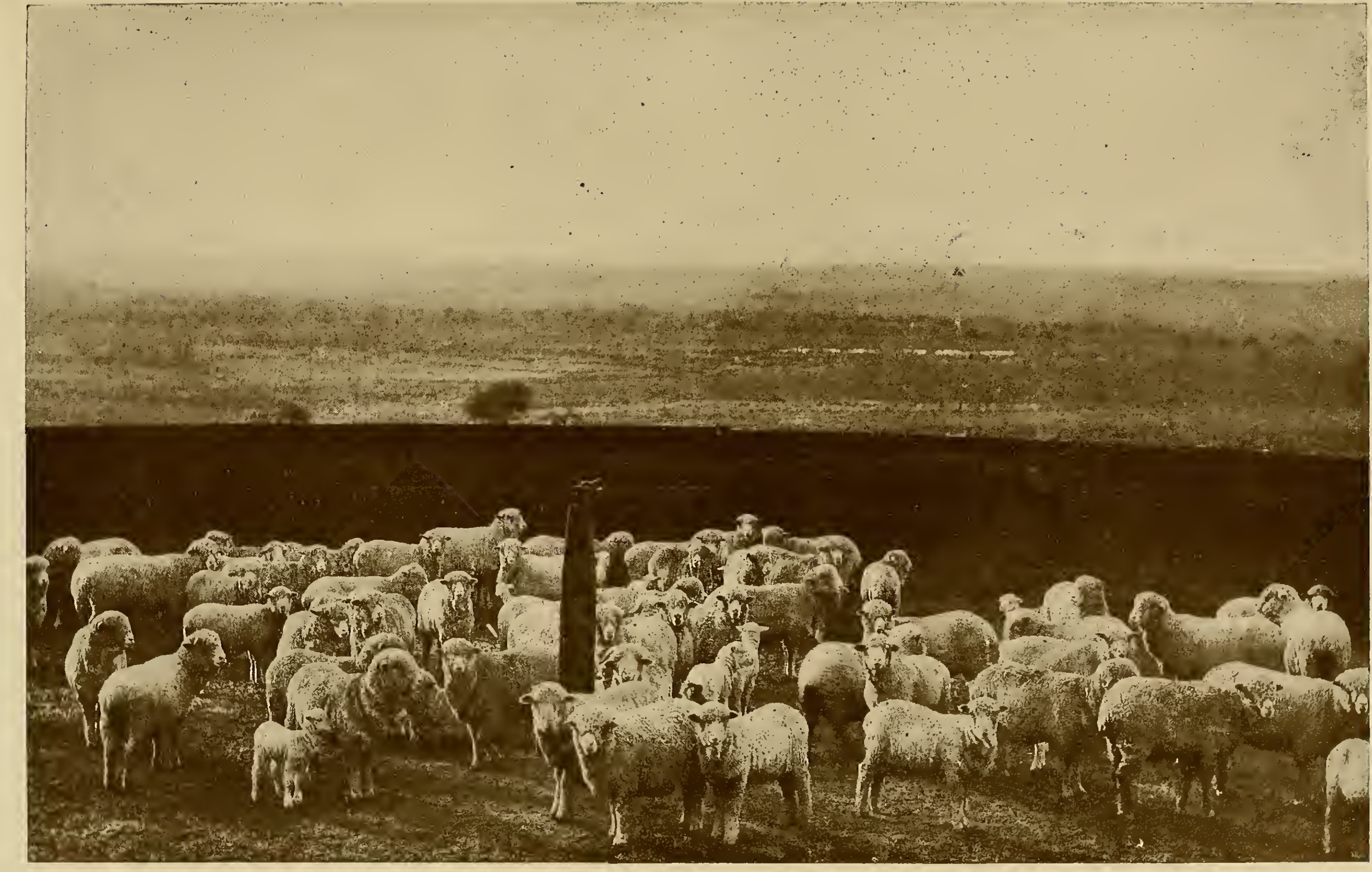
The exports by classes for the year 1909 and the preceding year were as follows:

	1908.	1909.
Live-stock products.		
Wool	$17, 429, 120. 54	$19, 317, 303. 81
Hides and skins	10, 267, 123. 68	11, 543, 139. 65
Meats and extracts	5, 878, 681. 89	6, 401, 195. 17
Live animals	1, 764, 614. 06	1, 854, 768. 52
Fats	1, 639, 429. 75	1, 657, 618. 84
Hair	347, 838. 63	354, 178. 09
Bones and bone ash	289, 565. 46	250, 047. 05
Residual products	135, 388. 86	205, 531. 28
Other products	18, 652. 33	12, 343. 89
	37, 770, 415. 20	41, 596, 126. 30
Agricultural products.		
Grain and seed	1, 760, 257. 72	2, 343, 551. 69
Flour, meal, etc	249, 342. 90	324, 131. 08
Feedstuffs	77, 995. 85	100, 609. 23
Fruits and vegetables	84, 528. 47	78, 018. 40
Other products	12, 084. 36	14, 205. 09
	2, 184, 209. 30	2, 860, 515. 49
Provisions for ships	301, 049. 10	386, 711. 86
Game and fish	153, 621. 38	165, 002. 62
Other products	102, 962. 62	82, 874. 07
	557, 633. 10	634, 588. 55

[The total of this table is $45,091,230.34 for 1909, less by $1,159,080.90 than the figures of the preceding table by countries.]

The details of the hides and skins exports for the year 1909 are as follows:

Cowhides, wet-salted	$4, 406, 588. 68
Cowhides, dry	3, 866, 177. 70
Wool fleeces	2, 478, 042. 00
Heifer and yearling dry hides	534, 902. 68
Sheepskins	69, 361. 75
Stillborn calf, dry	54, 037. 87
Heifer and yearling wet-salted hides	52, 221. 14
Filly and foal wet-salted hides	50, 978. 27
Stillborn calf	30, 771. 84
Tanned	186. 12
Kid skins	7. 24
Total	11, 543, 275. 29



A SHEEPFOLD IN URUGUAY.

The sheep represented in the illustration are pure-bred French Merinos of the Rambouillet breed. This is one of the most popular of all the Merino breeds, and fancy prices are paid in Uruguay and Argentina for the best of the imported stock. It is the custom to cross the Rambouillet rams on *criollo* stock, descendants of the British long-wool breeds; the get of this cross produces a wool with fiber longer than the Merino and finer and more highly imbricated than the *criollo*. This wool is quoted and sold in the market according to the proportion of the cross, each proportion being a different class of wool, one-half, three-eights, or one-fourth blood, as the case may be.

PRODUCTS AND INDUSTRIES.

The great sources of natural wealth of Uruguay are agriculture and cattle. It must be remarked also that the mineral possibilities of the country are beginning to attract attention, for, overshadowed by the great deposits of precious metals in the mountainous parts of South America, the mines of Uruguay have not always been noticed.

Many minerals are found within the limits of the Republic. Coal is known to exist in the Departments of Cerro Largo, Montevideo, and Santa Lucia, and borings carried on during 1910 gave satisfactory results. Mica has been discovered in the Department of Canelones, manganese is being developed, gold has for years been worked, petroleum has been found, and precious stones are known to exist.

Of the something more than 42,500,000 acres of land in Uruguay, practically 2,000,000 acres were devoted to agriculture, the forests occupy a little over 1,650,000 acres, and the rest is used as pasture. Of agricultural products, wheat leads, followed by maize, barley, oats, linseed, and bird seed. Tobacco is cultivated, and since this has recently been undertaken in a scientific manner, the prospects for its rapid improvement and increase are most favorable. Three schools of agriculture are now established in the Republic, and the Government is acting very energetically in helping to promote the teaching done in them. Hitherto the unrestricted tendency of the rural population has been to give their entire energy to pastoral work, somewhat to the neglect of the agricultural, but of late influence has been exerted to divide and subdivide the very large estates (estancias) into small holdings, putting them into the hands of those who had been unable to get possession of land, and this movement has given an encouragement to agriculture which will benefit the country in many ways. A forestry survey is being carried on by the division of agriculture and plans are under way to increase the area of wooded land, and for this purpose prizes will be given, taxation reduced, and seeds distributed. Millions of trees from all parts of the world have been planted on land otherwise of little value, and now they are sources of timber supply.

During 1910 a commissioner was sent to Europe to encourage farmers there to come to Uruguay. Immigration is stimulated by the Government, which is advertising the country's advantages and passing liberal laws to this end. Uruguay was one of the first nations in South America to couple with new railway projects the principle of assisted immigration along the railway line, and the results are beginning to show. In one construction project accommodation will be given to colonists, who will be furnished with land, houses, stock, and farming instruments for their work.

Industrial enterprises are growing. In Montevideo are several flour mills and boot and shoe factories. Furniture is made in considerable quantities. Brick and tile, cement and coke works are established, and large glass and bottle factories. Several woolen mills are in successful operation, and some cotton and linen cloth is woven. The manufacturing interests are chiefly, however, for local demand, and can not begin to meet the market, which must depend almost altogether upon the importation of foreign goods.

The LIVE-STOCK INDUSTRY continues to be the chief activity in Uruguay, although it may yield to agriculture as the country becomes more thickly populated and the price of land increases. It is estimated that the Republic counts its animals about as follows: Cattle, 8,200,000; sheep, almost 25,000,000; hogs, over 500,000; with mules, asses, horses, and goats. During 1910 almost 900,000 cattle were slaughtered in Uruguay, and large amounts of frozen beef, with other animal foodstuffs, were exported. An animal sanitary police has power to treat, quarantine, and destroy diseased animals and to prepare live-stock statistics. Jerked-beef (tasajo) production is one of the oldest established industries of the country, and this satisfies the taste of workers in Brazil, Cuba, and Porto Rico, whither it is chiefly exported. For further export the frozen-beef establishments and the beef-extract factories consume about all the cattle supply. Another great staple of the live-stock industry of Uruguay is that of the shearing and exportation of wool.

WOOL: Millions of virgin acres of seemingly virgin country are given over solely to sheep raising in Uruguay, and 25,000,000 is an approximate estimate of the number of sheep in the country, so it can be said to be an important factor in the world's wool production. Local conditions and climate, together with intelligent methods of propagation, have brought about a consistent increase of the flocks of sheep that has made the wool clip of Uruguay one of the greatest sources of wealth to the little Republic.

Sheep herding rivals farming as the oldest legitimate occupation of man. The farmer and shepherd follow the hunter and soldier in antiquity of existence, while wool as clothing came into fashion when fig leaves and skin went out. Sheep supplied man with both food and covering; therefore the wool industry fulfilled a double purpose from the very beginning. Just how the first savage discovered those peculiar properties of the hair of sheep which made the fabrication of cloth possible will never be known, but we do know, however, that sheep shearings laid out thin, dampened, and beaten with a round stone will make cloth, and that this cloth serves millions of semicivilized people to-day.

This process must be much the same as that employed by primitive man. Viewed under a microscope wool fiber will show a strikingly curious construction. A great number of overlapping sharp-pointed edges will be distinguished on the fiber; these are the "imbrications" and they give to the separate "hairs" that extraordinary holding together and matting quality which is characteristic of all wool. The number of these imbrications determines the value of the product. Merino, the finest wool, will show some 2,800 of these imbrications to the inch of fiber. Southdown sheep, which supply fine mutton as well as excellent wool, may have but 2,200 overlapping edges on an inch of hair, and thus the serrations decrease in number according to the quality of wool. In certain exceptions the absence of this characteristic of wool does not mean lower commercial value; alpaca, a coarse wool, and mohair, almost without imbrications, are expensive. The innumerable uses of felt, woolens, and worsteds, all the product of wool, are matters of common knowledge, but the process of turning the hair of the sheep of to-day into the blanket of next winter is long and complicated. From the pampas of Patagonia to the woolen mills of Worcester the raw product is carried, where in the rattle and roar of giant machinery it is torn apart with ruthless wire-toothed combs, then woven together again by a thousand twisting spools.

To-day sheep may be broadly divided into two great classes—the Spanish and the British, omitting the Asiatic breeds. The finest sheep in the world came originally from Spain, so it was most natural that the ships of the first colonists sailing from that country for America should carry numbers of these animals. That was the beginning of the wool industry of South America. While all the countries produce wool from domestic sheep, Uruguay, Argentina, and Chile lead the rest in the matter of exports. In these three countries the greatest care has been given to the selection and development of types that thrive best under local conditions and no expense has been spared in searching Europe for the finest varieties. However, it is not alone the clip of domestic sheep that measures the entire wool wealth of South America. Four native species of wool-bearing animals give the world's supply of special qualities of wool, a supply that is always less than the demand. The guanaco, the llama, the vicuña, and the alpaca all belong to a remote branch of the camel family residing in South America. The first two are named chiefly for food and as beasts of burden; their wool is of minor importance and masquerades as alpaca. Vicuña and alpaca wool are identified by the animals producing them (except for the fraud already indicated) and bring good prices in the market; the former because of its fineness is worth just twice the price of the latter.

Found in the Andes, principally in Peru and Bolivia, the alpaca was the animal that furnished wool for the Incas, and doubtless the manner of weaving practiced in Cuzco to-day is the same art that was in vogue with the ancestors of the Chulas. The animal is sheeplike in habits and yields a wool from 2 to 6 inches long, white, black, or gray, with sometimes shades of brown or fawn, lustrous, and of fine quality. It was made known to Europe in 1836, and numbers of the animals were exported to the Continent and Australia in hopes of breeding them, but they soon died off, continuing to be restricted in habitat to the plateaus of the Andes. Peru exports annually between 4,000,000 and 6,000,000 pounds of alpaca wool, while Ecuador and Bolivia send it out in smaller totals. The alpaca of trade, however, contains very little of true alpaca wool in these days of commercial subterfuge, and as for legitimate vicuña, its rareness may be judged from the amount exported from Peru yearly, about 10,000 pounds, which is a large part of the world's total supply. The vicuña is a wild animal, being seldom domesticated, which accounts for the short supply of its wool. It runs in the highest cordilleras, is about 30 inches tall at the withers, with short but very fine wool of reddish-yellow color. But it is not in these wild wools that we must look for the future wool wealth of South America, but rather in those great flocks of domestic sheep that roam the borderlands of civilization in Argentina, Chile, and Uruguay under conditions that promise to make this section of the earth foremost in the production of the finest wool in the world.

RAILWAYS AND INTERIOR WATERWAYS.

Railway lines of standard gauge, 4 feet 8½ inches (1.44 meters), in operation at the end of the year 1910 amounted to 2,311 kilometers (1,436 miles). There were reported last year 58 kilometers (36 miles) of narrow gauge. This brings the length of the railways in Uruguay in 1910 to 2,369 kilometers (1,472 miles). Of the standard-gauge lines 1,505 kilometers (935 miles) were subsidized.

During the year construction work was finished and the lines opened to traffic of 52 kilometers (32 miles) on the Midland Railway, 50 kilometers (31 miles) on the eastern extension of the Central Railway, and 63 kilometers (39 miles) on the Eastern Railway. At the end of the year there were under construction the line between Alcorta and Fray Bentos, by which that great industrial center will be placed in direct communication with the rest of the Republic; the line between Treinta y Tres and Batlle y Ordoñez, by which a new section of country toward the northeast will become accessible; and the entirely new system of the Pan American Transcontinental Railway, which is to cross the Republic from Colonia to San Luis on the Brazilian frontier.

This last railway is one of the most ambitious projects of the Government for many years. It will start on the Brazilian border, at San Luis, and pass through a magnificent agricultural region, rich in minerals, to Trinidad, thence a distance of 580 kilometers (360½ miles) to Colonia, on the River Plate, opposite to and 26 miles from Buenos Aires; the Colonia terminals will include docks, warehouses, and elevators, the depth of water allowing large ocean steamers to load and discharge.

The line must be finished within four years after the date of approval of the concession, and the company is required to invest in the fixed port works of Colonia no less than $1,070,630, and a further sum of $145,995 in steamers and lighters for the exclusive use of that port, the total sum to be expended within three years. The company further agrees to colonize at least 15 square leagues of land with families fitted for agricultural life and work.

Other plans for railway extension or for entirely new lines to open rich territory were encouraged during the year. A railway is to be built from the port of La Paloma, on the Atlantic, to Treinta y Tres, passing the towns of Rocha and Lascano, and crossing the Cebollati River, about 205 kilometers (127 miles) long. There is also a project for what is to be called the Trans-Uruguayan Railway Syndicate, which purposes to construct a new port at Coronilla, to be renamed Atlantica, capable of accommodating the largest vessels, and in connection therewith a railway of standard gauge to bisect the Republic from east to west.

The year 1910 was productive of excellent results for the Uruguayan railways, the passenger, freight, and baggage traffic having been increased very noticeably in comparison with recent years. This may be regarded as a trustworthy index of the development, progress, and prosperity of the Republic. The subsidy paid by the Government to railways during 1910 amounted to $164,670.81.

The excellent and extensive river system of Uruguay provides the country with over 700 miles of navigable rivers, the most important being the Plata and Uruguay Rivers, which together furnish over 500 miles. On the Uruguay River there are as many as 10 ports open to interoceanic trade, viz, Carmelo, Nueva Palmira, Soriano, Fray Bentos, Nuevo Berlin, Casa Blanca, Paysandu, Nuevo Paysandu, Salto, and Santa Rosa. On the Rio Negro is the interior port of Mercedes and on the San Salvador River a port of the same name. The Uruguay River is navigable for vessels of 14 feet draft as far as the city of Paysandu, and above that for vessels of 9 feet draft. The Rio Negro is navigable for ocean-going vessels as far as the city of Mercedes, and above that for light-draft vessels; and the Cuareim, Yi, Tacuarembo, Queguay, Arapey, Cebollati, Santa Lucia, San José, Yaguarón, Olimar, Tacuari, Dayman, San Salvador, and San Luis are all navigable short distances for ocean-going vessels and for small craft into the interior of the country.

The only lake of any importance is Lake Merim, situated on the border of Brazil, on which a regular line of steamers maintains communication with the different towns along its shores.

THE PRESS OF URUGUAY.

The first periodical publication to be issued in Uruguay appeared in Montevideo in 1807. It was called La Estrella del Sur (The Southern Star) and was brought into existence during the time that the English Army dominated the city. It was in Spanish, but its purpose was to deprecate the Spanish cause and to spread among the people such ideas as would incline them to favor the ambitions of Great Britain in respect to that part of the world.

When the British Army evacuated Buenos Aires the paper ceased to live, and several years passed before Montevideo had the advantage of this particular element in civilization. Argentina had had a printing press almost at the beginning of the century, and after the revolution of 1810 there were published various papers in Buenos Aires in which was begun an active propaganda in support of the popular movement of that time. As Montevideo had remained adherent to the Spanish rule, the press of Buenos Aires made a paper war upon the city across the River Plate, and no direct means existed there whereby the attacks upon the country of Uruguay could be counteracted. The authorities of Montevideo therefore petitioned Princess Carlota, the wife of the regent of Brazil and a woman who would favor in every way the established order, to send a printing press to Montevideo, so that a newspaper could be published in that capital. Carlota did obtain permission from the regent to send a press with type from the Royal Printing House, and on it was printed the paper called La Gaceta. This press was in use for years, and even as late as the middle of the century was named, on account of the peculiar character of the type, La Carlota.

After the revolution and the struggle that finally ended in the independence of the Republic of Uruguay but little effort was made for the establishment of a periodical press. A few were started, passed a brief existence, and then ceased. To be sure the papers of Buenos Aires had their influence, as it was easy to carry them across the river, and on occasions greater effect was produced by having them published outside the country. Of those issued up to the middle of the century, therefore, none survived.

The oldest newspaper in Uruguay with a continuous history from the day of its beginning is El Telégrafo Marítimo, founded in 1850. This is a daily afternoon paper devoted to commercial and industrial matters. The next oldest is El Siglo, a daily morning paper founded in 1863. Since then the press of the country has grown to noticeable proportions, there being at last accounts 210 periodicals in the Republic. Of course Montevideo, being the capitol and the largest city, both in population and in commerce, has the great majority (144) of these publications, but the interior towns are well represented, and there is no place of importance but has its paper devoted to local interests. This number includes several reviews appearing weekly or monthly and special periodicals devoted to art, literature, and science. In the capital 12 dailies are registered, one being in the interest of the Italian, another in that of the English residents of the country.

The average daily paper of Montevideo is rather large in size, measuring about 18 by 24 inches. It has from 4 to 8 pages, with 6 to 7 columns. In some papers the first page is given entirely to advertisements, in others to telegraph news and local reading atricles. Fully one-half of the total printed matter is advertising, often in simple notices, but quite generally in illustrated displays which attract the eye at once. The banks and shipping companies make liberal use of the papers and from them alone it can be estimated how prosperous and lively the commercial movement of the port is. In the circulation there is not an international extension but the best of the dailies cover the Republic thoroughly. The number of copies amounts to 6,000 of the smaller sheets but runs up to 20,000 and occasionally above it. Advertising rates are based on the column centimeter (about $\frac{4}{10}$ inch). This unit costs, each issue, from 21 cents (gold) to 52 cents (gold). Higher prices are paid for very prominent space, and good reduction is granted in contracts for continuous insertions. As the people of Uruguay are exceedingly well educated and keep posted on affairs of the day their progress in all things is noticeable, and one of the best ways to reach them to call their attention to whatever adds to their comfort and industry is through their newspapers.

CARTS LADEN WITH WOOL LEAVING AN ESTANCIA IN URUGUAY.

Uruguay is second to the Argentine Republic in South America in the wool and sheep industry. The export of wool from Montevideo is close to 100,000 bales per annum.

VENEZUELA

The United States of Venezuela has an area of 393,976 square miles, with a population (1910 estimated) of 2,685,606, or 6.8 per square mile. It is divided geographically into three distinct zones, viz, the extensive plains and river valleys, known as llanos, affording excellent pasturage for cattle; the mountain section, formed by three mountain ranges; and the table-lands. This variety of physical features produces an equal variety of climate, products, and soil. Coffee and cacao are largely grown and exported, and wheat and other cereals thrive. The mountains are heavily wooded and many useful trees and plants are found. The mines produce gold, silver, copper, and lead; the various asphalt lakes yield the best qualities of asphaltum; and along the coast pearls are obtained.

COAT OF ARMS OF VENEZUELA.

The constitution of the United States of Venezeula is that of August 5, 1909, and provides for legislative, executive, and judicial branches of the Government. The legislative authority is vested in a Congress composed of a Senate and Chamber of Deputies, the former consisting of 40 members elected for four years by the legislative assemblies of the States, two senators and two substitutes for each State; the latter composed of deputies, who are also elected for four years by direct popular vote at the rate of one deputy for every 35,000 inhabitants or fraction exceeding 15,000, with substitutes elected in the same manner. Suffrage is possessed by all citizens who are 21 years old. Congress meets annually on April 19 at the capital, Caracas, the session lasting 70 days, which period may not be extended, but it may be convened in extra session at any time by the President.

The executive power is vested in a President elected for four years by Congress. He receives an allowance for salary and expenses of 108,000 bolivares ($20,844). The President is assisted by a cabinet of eight ministers, which he appoints, one of whom is the Governor of the Federal District, and a council of government of 10 members, elected by Congress for four years. There is no Vice President, but the presiding officer of the council of government replaces the President in case of absence, disability, or death. The President and cabinet, on July 1, 1911, were as follows:

President: Gen. Juan Vicente Gomez.
Minister of the Interior: Gen. Francisco Linares Alcántara.
Minister of Foreign Affairs: Gen. Manuel Antonio Matos.

Minister of the Finance and Public Credit: Gen. Antonio Pimentel.
Minister of War and Navy: Gen. Manuel Vicente Castro Zavala.
Minister of Public Instruction: José Gil Fortoul.
Minister of Fomento (Promotion): Dr. Aguiles Iturbe.
Minister of Public Works: Dr. Román Cárdenas.
Governor of the Federal District, Gen. V. Marquez Bustillos.

The Department of the Interior (Ministerio de Relaciones Interiores) maintains relations with the various States through their governors and representatives; has charge of the administration of the Federal Territories, public health and sanitation, public charities, navigation, relations with the Roman Catholic Church, the federal archives, the administration of the Federal District, pensions, official publications, the civil register, the federal courts and penal institutions, and the care of the native Indians.

The Department of Foreign Affairs (Ministerio de Relaciones Exteriores) is intrusted with all matters relating to the maintenance of cordial and peaceful relations with foreign nations and has charge of the diplomatic and consular corps, the settlement of international boundary disputes, and international expositions.

PRESIDENT JUAN VICENTE GOMEZ.

The Department of Finance and Public Credit (Ministerio de Hacienda y Crédito Público) has charge of the collection of all revenues and disbursement thereof, the preparation of the annual budget, the service of the public debt, and the administration of customhouses and the Government salt deposits.

The Department of War and Navy (Ministerio de Guerra y Marina) has charge of the standing army, of the recruiting and training of the reserve forces and of the citizens, as well as personnel of the navy. The military academy, the nautical school, and the coast and lighthouse service are also under its jurisdiction.

The Department of Public Instruction (Ministerio de Instrucción Pública) has jurisdiction over all public and private schools and institutes, including the Central University at Caracas, the University of Los Andes at Merida, the schools of arts and crafts, the school for manufacture of straw hats, the National Academy of Fine Arts, the National Museum, and the National Library.

The Department of Promotion (Ministerio de Fomento) attends to all matters relating to the promotion of commerce and industries and the development of the natural resources of the country. It is divided into four sections, viz, those of Mines, Industries, and Commerce; Agriculture, Cattle, and Colonization; Posts and Telegraphs; and Statistics.

The Department of Public Works (Ministerio de Obras Públicas) exercises jurisdiction over the railways, roads, and bridges, the water works, sewers, and drainage of towns in the Territories and in the capital, the construction of all public works, and maintenance of public buildings.

The federal judiciary comprises the supreme court (corte federal y de casación), several courts of appeal, and a number of minor courts. The supreme court justices, seven in number, are elected by Congress for four years.

The standing army numbers 5,632 men, and there is a reserve estimated at 100,000 men. The navy consists of about 6 vessels, with a personnel of 457.

NATIONAL THEATER AT CARACAS, VENEZUELA.

One side of this edifice faces Washington Square, in which stands the monument erected by Venezuela in honor of George Washington.

There are now in active operation in the country 7 exchange post offices, 31 principal or first-class offices, and 251 subordinate post offices. The Government is a member of the Universal Postal Union, and has also joined the South American service recently considered at the postal congress in Uruguay.

The national telegraph lines now have an extension of 7,889 kilometers (4,902 miles), serving 183 telegraph stations in the country. The telephone service of the Government measures 458 kilometers (285 miles) of line, on which are 285 telephones. During the year 26 private telephone line were constructed under permit of the Government. The Venezuela Telephone & Electric Appliances Co. (Ltd.) with its head office in Caracas, maintains 20 stations, with 2,705 subscribers.

Twenty States, 2 Territories, and a Federal District comprise the Republic. The States are politically equal, each having a legislative assembly, a president, secretary general, and a council of government. The Territories are administered by governors appointed by the president, as is also the Federal District, the latter also having a municipal council elected by the qualified voters therein.

VENEZUELA IN 1910.

The revolution for political freedom in Venezuela was begun in 1810, but the declaration of independence was affirmed in 1811, and for that reason the Republic, while joining heartily in the centenary celebrations of many of the other countries of Latin America, decided to hold its own centennial celebration in 1911, as a fitting recognition of that important event in its history. Plans were therefore prepared, under presidential decrees of March 19 and May 26, 1910, for the principal ceremonies to take place from June 24 to July 24, 1911, with July 5 as the central date.

During the year 1910 commercial prosperity steadily improved, and in fact both imports and exports showed higher figures than for any similar period of the last eight years. The same conditions prevailed in regard to internal trade, and with the rich natural advantages of the Republic only well-planned foreign investments are needed to add greatly to the material development of the country.

The Republic continued its harmonious associations with the nations of the world, although the direct relations with France and the Netherlands have not yet been reestablished. Active steps have been taken to settle many long-standing questions of boundary, commerce and navigation with the Republic of Colombia, and diplomatic negotiations with other countries have made good progress.

Financially the affairs of the treasury are very satisfactory, as economy and business management have characterized the conduct of that branch of the Government, and its obligations have therefore been faithfully met.

The military academy was inaugurated and a nautical school created during the year. At Puerto Cabello a revenue cutter was constructed almost altogether by native workmen and material, a demonstration of the industrial advance which the country is encouraging. In line with these improvements it should be noted that nearly 4,000,000 bolivares (not quite $1,000,000 gold) were spent on highways and roads, avenues, streets, and plazas, bridges, repairs of Government buildings, and other public works.

The agricultural conditions were normal, but the amount of coffee exported, forming 45 per cent of the total exports, was less than in 1909, although the price obtained compensated for reduced quantity.

Cacao, balata, and rubber are other crops which have added to Venezuela's prosperity. The number of cattle in the country is said to have decreased, but with the stimulus that will follow the operation of the refrigerating plant in Puerto Cabello, this industry will be brought back to its former importance.

Coastwise transportation has been considerably developed during the year, and the business of the new Venezuelan company now plying two steamers between Lake Maracaibo and the Orinoco River, with the fleet of lake steamers on Maracaibo Lake and tributary rivers, has proven very profitable, the company having paid annual dividends of 28 per cent.

FINANCE.

According to the report of Sr. Don Antonio Pimentel, Minister of Finance and Public Credit, submitted to the National Congress April 19, 1911, the ordinary receipts and expenditures of the Government for the fiscal year ending June 30, 1910, were as follows:

RECEIPTS

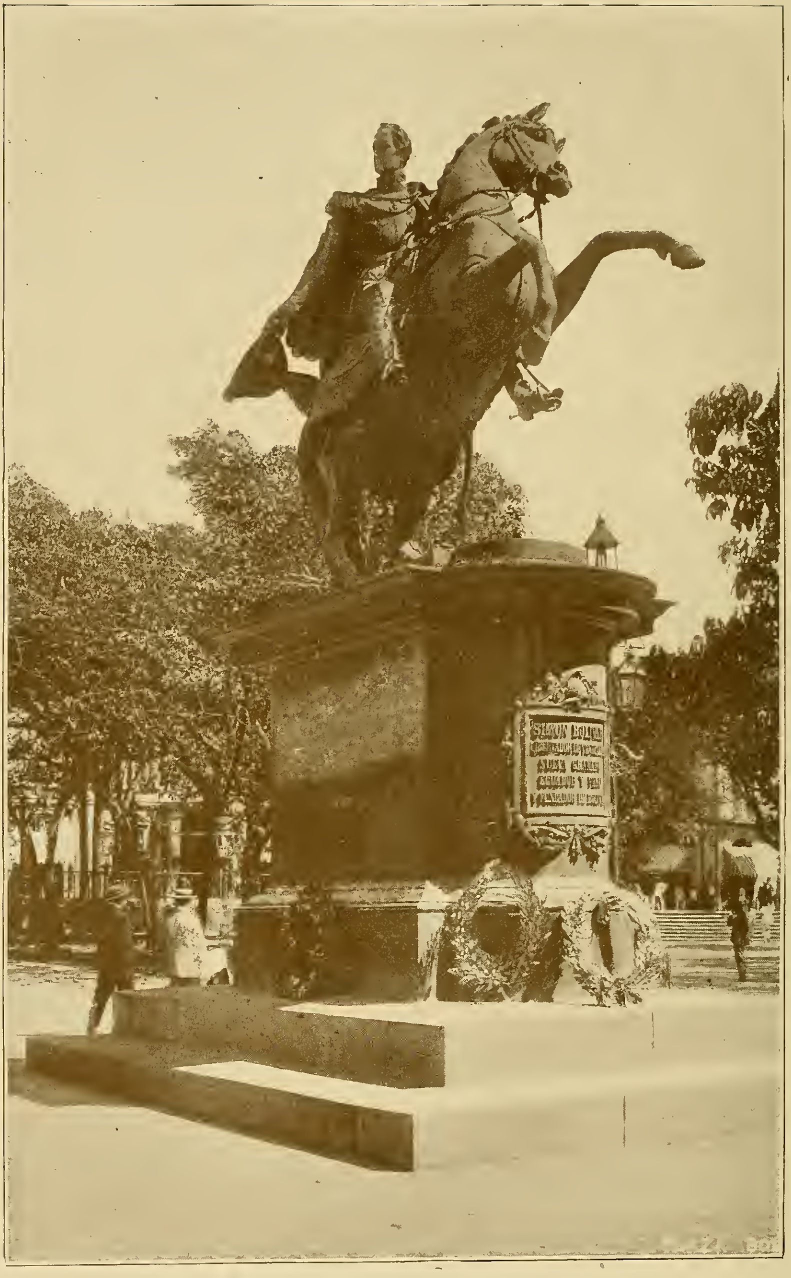
	Ordinary receipts.
	Bolivars.
Customs receipts	21,827,367.80
National internal taxes	18,759,657.88
Special State taxes	7,965,831.13
Total	48,552,856.81

EXPENDITURES.

Departments.	Ordinary expenditures.
	Bolivars.
Internal affairs	12,136,410.04
Foreign affairs	918,121.82
Finance and public credit	18,349,752.37
War and marine	9,611,531.18
Fomento	3,475,295.46
Public instruction	3,106,050.58
Public works	1,578,433.10
Special expenditures of the departments	3,161,580.68
Total	52,337,175.23

Including the extraordinary receipts and expenditures, treasury balances and receipts and expenditures on account of the national debt, the total receipts amounted to 86,053,970.21 bolivars, and the total expenditures to 78,919,076.46 bolivars. The asset balance on July 1, 1909, is stated at 49,262,033.84 bolivars, and on June 30, 1910, at 56,396,927.59 bolivars. The difference between these two last sums represents the increase in all classes of receipts for the year. This increase, amounting to 7,134,893.75 bolivars, is shown by the report as representing the balance of receipts over expenditures for the fiscal year ending June 30, 1910.

In the report of Minister Pimentel it is said: "On June 30, 1910, the amount of the asset balance reached 56,396,927.59 bolivars, and is represented, for the greater part, in national properties, stamps, stamped paper, national debt (i. e., owned by the



STATUE OF BOLIVAR IN LA PLAZE BOLIVAR, CARACAS.

Government), furniture, and other values." From the list given by the minister the following principal items are extracted:

	Bolivars.
Cash on hand	213, 156. 29
Furniture	236, 223. 71
Real estate	3, 406, 453. 73
Stamped paper	517, 801. 00
Mining revenue stamps	985, 911. 15
Salt licenses	935, 947. 50
Foreign commerce transit bonds	2, 047, 138. 90
Municipal taxes of the Federal District	977, 024. 98
Railway stock on deposit in Bank of Venezuela	1, 792, 804. 00
Certificates of internal debt belonging to Department of Public Instruction and to Chavez College	10, 585, 539. 45
Public-instruction tax stamps	22, 257, 480. 20
Postage stamps	1, 867, 902. 00
Cigarette and match stamps	1, 817, 000. 00
Accounts due	8, 274, 769. 20

Among the principal items of ordinary receipts, under the subheading National Internal taxes, were:

	Bolivars.
Extraordinary contribution of 30 per cent	6, 187, 115. 73
National tax of 12½ per cent	2, 033, 246. 41
National liquor tax	2, 020, 739. 49
Telegraph and cable lines	296, 608. 70
Wharves and lighterage	412, 901. 49
National cigarette paper tax	3, 531, 495. 96
Stamp tax for public instruction	1, 511, 566. 03
Interest on public debt owned by educational institutions	314, 016. 25
Cigarette paper and stamp taxes (farmed)	1, 374, 999. 99

The principal items under the subheading Special State taxes were:

	Bolivars.
Territorial tax of 12½ per cent	3, 239, 443. 61
Salt tax	3, 506, 120. 54
State liquor tax	960, 700. 72

According to the report of the Minister of Finance and Public Credit, the debt statement on July 1, 1909, and July 1, 1910, was as follows:

	Internal 3 per cent debt.	Diplomatic 3 per cent debt of 1905.	Diplomatic agreements amortizable.
	Bolivars.	*Bolivars.*	*Bolivars.*
Amount on July 1, 1909	60, 732, 202. 78	118, 065, 970. 00	5, 807, 883. 83
Increase by conversion	1, 961, 808. 69		
Total	62, 694, 011. 47	118, 065, 970. 00	5, 807. 883. 83
Decrease by payments	1, 473, 142. 17	3, 194, 125. 00	429, 964. 90
Amount on July 1, 1910	61, 220, 869. 30	114, 871, 845. 00	5, 377, 918. 93

	Diplomatic agreements not amortizable.	Consolidated noninterest bearing debt.	Washington protocols of 1903.
	Bolivars.	*Bolivars.*	*Bolivars.*
Amount on July 1, 1909	5, 733, 490. 26	3, 730, 211. 78	14, 534, 290. 53
Increase by conversion		149, 338. 24	
Total	5, 733, 490. 26	3, 879, 550. 02	14, 534, 290. 53
Decrease by payments		1, 384, 616. 81	3, 486, 261. 54
Amount on July 1, 1910	5, 733, 490. 26	2, 494, 933. 21	11, 048, 028. 99

RÉSUMÉ.

	Bolivars.
Total debt in force July 1, 1909	208, 604, 049. 18
Increase by conversion	2, 111, 146. 93
Total	210, 715, 196. 11
Decrease by payments	9, 968, 110. 42
Total in force on June 30, 1910	200, 747, 085. 69

Gen. Juan Vincente Gomez, President of Venezuela, in his message to the National Congress of April 19, 1911, says: "During the fiscal year 1909–10 there was paid on account of the debt and for acknowledged claims the amount of 12,704,782.63 bolivars, and from June, 1910, up to the 15th of this month (April, 1911), 10,144,676.07 bolivars, as follows:

	Bolivars.
Diplomatic 3 per cent debt of 1905	4, 106, 716. 65
Diplomatic agreements	570, 924. 21
National internal consolidated debt	1, 559, 943. 12
Washington protocols	2, 981, 950. 99
Critchfield claim	318, 034. 25
Manoa claim	258, 930. 85
Orinoco Steamship Co. claim	348, 176. 00
Total	10, 144, 676. 07

In his message the President further states: "On March 31, 1910, the Republic owed 187,761,285.86 bolivars, as follows:

	Bolivars.
Diplomatic 3 per cent debt of 1905	113, 307, 355. 00
Diplomatic agreements amortizable	4, 970, 347. 43
Diplomatic agreements not amortizable	5, 733, 490. 26
National internal 3 per cent debt	61, 565, 967. 09
Internal consolidated noninterest bearing debt	2, 184, 126. 08
Total	187, 761, 285. 86

FOREIGN COMMERCE.

The foreign commerce of Venezuela, compiled from official Venezuelan reports except as stated, for the year 1910 amounted to 157,181,984.01 bolivars, of which 64,184,206.63 bolivars were imports and 92,997,777.38 bolivars exports. The figures for the preceding year were 50,601,977.68 bolivars imports and 83,049,922.83 bolivars exports, or a total of 133,651,900.51 bolivars. This shows a gain of 13,582,228.95 bolivars in the imports and 9,947,854.55 bolivars in the exports, or a total gain in the foreign commerce of 23,530,083.50 bolivars.

Estimating the bolivar at 19.3 cents United States gold, the foreign trade of Venezuela for the year 1910 amounted to $30,336,122.91, of which $12,387,551.88 was imports and $17,948,571.03 exports. The gain for the year in imports was $2,621,370.19 and in exports $1,919,935.93, or a total gain during 1910 of $4,541,306.12.

IMPORTS.

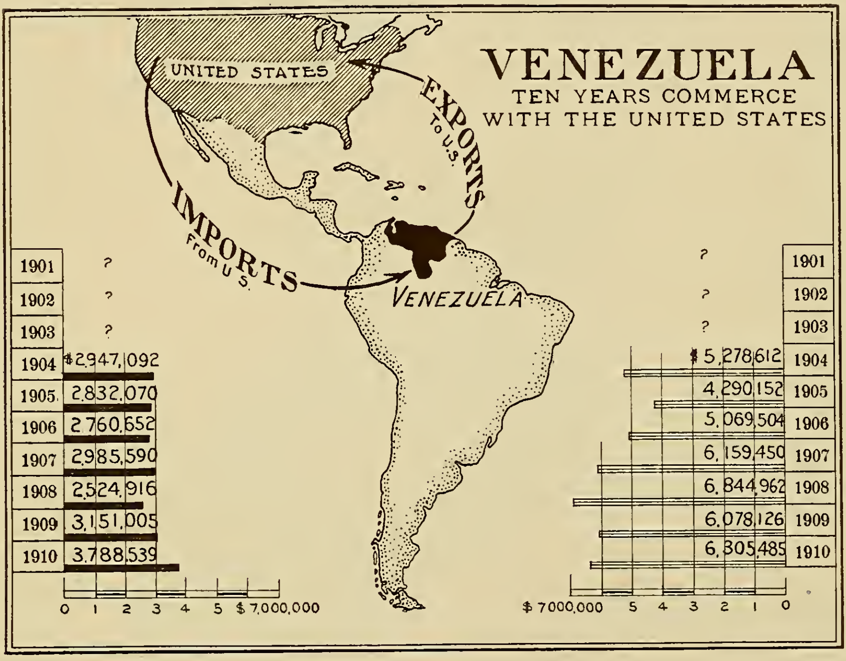
The imports by principal countries for the two years were as follows:

	1909	1910
United States	$3, 151, 005. 33	$3, 788, 539. 40
United Kingdom	2, 348, 802. 36	3, 625, 681. 31
Germany	2, 075, 569. 83	2, 039, 287. 37
France	659, 156. 91	998, 906. 28
Netherlands	568, 541. 04	907, 004. 60
Spain	526, 824. 96	537, 530. 61
Italy	$354, 527. 87	$333, 092. 27
Belgium	42, 052. 36	41, 367. 72
Other countries	39, 701. 03	116, 142. 32
Total	9, 766, 181. 69	12, 387, 551. 88

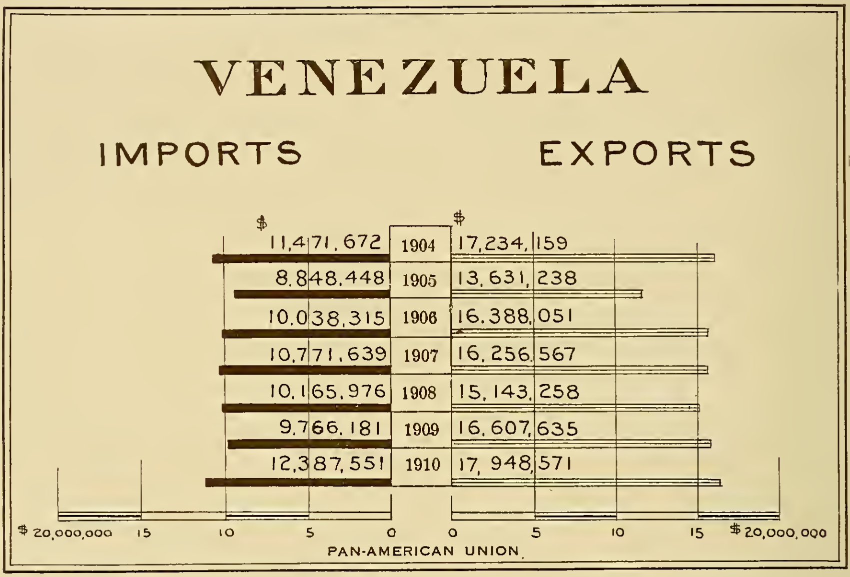
There were increases in the imports from the United States, the United Kingdom, France, Netherlands, and Spain, and decreases in the imports from Germany, Italy, and Belgium. The increase in imports from the United States was $637,534.07, or 20.2 per cent; United Kingdom, $1,276,878.95, or 56.7 per cent; France, $339,749, or 51.5 per cent; Netherlands, $338,463.56, or 59.5 per cent; and Spain, $10,705.65, or 2 per cent. The decrease in imports from Germany was $36,282.46, or 1.2 per cent; Italy, $21,435.60, or 6 per cent, and Belgium, $684.68, or 1 per cent.

According to United States Consul Isaac A. Manning, of La Guaira, the following were the principal articles of Venezuelan imports for the year 1910:

Arms and ammunition, $107,779, of which from the United States, $88,024; from Germany, $7,147; from Spain, $7,015. Bagging, $217,070—United Kingdom, $184,605; Netherlands, $16,875; Germany, $11,640. Biscuits, $65,995—United States, $45,720; United Kingdom, $9,855; Germany, $6,450. Butter, $198,910—Germany, $87,010; United States, $66,830; France, $29,415; Netherlands, $14,570. Canned goods and prepared foods, $274,905—United States, $103,200; Germany, $61,315; Spain, $38,360; Netherlands, $26,070; France, $17,400; United Kingdom, $16,650. Cigarette paper, $73,570—All from Spain. Cement, $52,978—United States, $21,550; Germany, $17,050; United Kingdom, $15,670. Coal, $42,750—United Kingdom, $31,180. Cotton goods, $3,756,750—United Kingdom, $2,367,370; Germany, $388,510; United States, $289,070; Netherlands, $260,875; Spain, $186,205; Italy, $154,645; France, $100,575. Drugs and medicines, $554,585—United States, $234,500; Germany, $130,065; France, $117,880. Flour, $676,565—United States, $674,235. Glass and earthenware, $72,350—Germany, $47,605; United States, $11,420; Netherlands, $6,315. Enameled ironware for domestic use, $80,975—Germany, $53,720; United Kingdom, $11,995; Netherlands, $10,155. Leather, $148,555—France, $65,505; United States, $47,690; Germany, $18,505; United Kingdom, $13,740. Agricultural machinery and implements, $181,125—United Kingdom, $89,645; United States, $59,045; Germany,



$421,470. Machinery, not specified, $206,193—United States, $112,850; Germany, $39,340; United Kingdom, $34,741. Kerosene oil, $146,435, practically all from the United States. Olive oil, $79,872—Spain, $44,140; Italy, $19,185. Perfumery, $107,567—France, $57,784; Netherlands, $13,911; United Kingdom, $12,623; United States, $11,473; Germany, $10,461. Paper, not specified, $129,800—Germany, $50,969; United States, $36,174; Netherlands, $22,807. Rice, $258,624—Germany, $154,391; Netherlands, $93,417. Rope, $69,773, nearly all from the United States. Stearin, $209,533; Netherlands, $194,220; Belgium, $11,270. Woolen goods, $247,949—United Kingdom, $154,375; Germany, $50,757; France, $27,116. Wines and liquors, $362,194—Spain, $102,318; France, $99,475; Germany, $53,911; United Kingdom, $53,824. Wire, galvanized, barbed, $75,045—United States, $71,110.



EXPORTS.

The exports from Venezuela for the calendar year 1910 and for the preceding year, by principal countries, were as follows:

	1909	1910		1909	1910
United States	$6,078,126.70	$6,305,485.61	Netherlands [1]	$1,076,679.57	$660,692.40
France	5,134,468.30	5,625,845.09	Austria-Hungary	111,721.52	80,155.61
Germany	1,071,292.09	2,313,556.46	Other countries	353,081.25	137,028.79
United Kingdom [1]	1,650,125.76	2,103,907.94			
Spain	553,139.91	722,498.13	Total	16,028,635.10	17,948,571.03

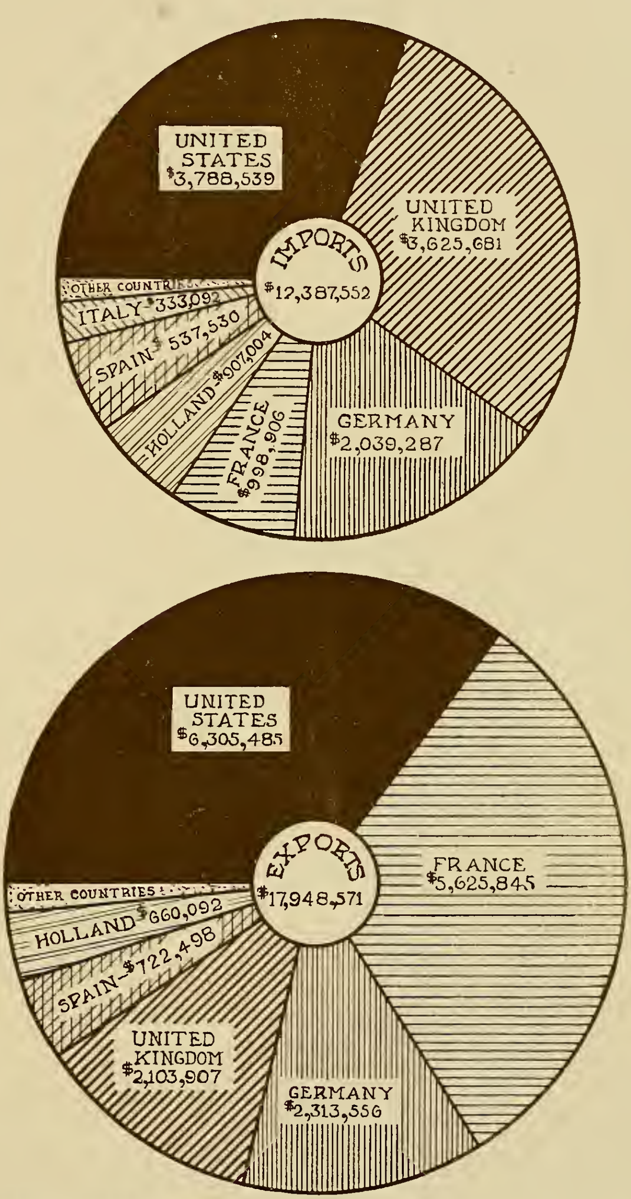
[1] The figures for the United Kingdom include those of Trinidad and for the Netherlands, Curacao.

Of the countries named above all show a gain in Venezuelan exports except the last two—the Netherlands and Austria-Hungary. The gain in exports to the United States was $227,358.91, or 3.7 per cent; France, $491,376.79, or 9.5 per cent; United Kingdom, $453,782.18, or 27.5 per cent; Germany, $1,242,264.37, or 115.9 per cent; Spain, $169,358.22, or 30.6 per cent. The loss in exports to the Netherlands was $416,587.17, or 38.7 per cent, and to Austria-Hungary, $31,565.91, or 28.3 per cent.

VENEZUELA

— COMMERCE — FISCAL YEAR 1910-11 —

$30,336,123



Pan American Union
Wash., D.C.

H M Riveao

The principal articles of export for the year 1910 were as follows:

Coffee	$8, 050, 774. 26
Cacao	3, 381, 733. 96
Balatá rubber	2, 193, 902. 25
Hides	932, 480. 08
Rubber	851, 939. 24
Goatskins	380, 318. 55
Gold bars and dust	309, 287. 24
Live cattle	193, 840. 13
Asphalt	183, 133. 07
Cattle horns	172, 421. 76
Copper ore	151, 505. 00
Sugar, raw	147, 847. 36
Heron plumes (aigrets)	134, 014. 86
Dividivi (wood)	105, 959. 12
Pearls	78, 962. 09
Refrigerated beef	76, 025. 60
Wood, not specified	59, 505. 26
Deerskins	53, 906. 37
Sole leather	45, 515. 38
Balsam of copaiba	44, 608. 16
Plumes, not specified	34, 272. 26
Leaf tobacco	34, 165. 65

Of the three principal articles of export the United States took of coffee, $3,985,492; cacao, $399,047; and balatá rubber, $90,645. France, coffee, $2,510, 530; cacao, $1,930, 061; balatá rubber, $836,255. United Kingdom, coffee, $23,468; cacao, $521, 285; balatá rubber, $590,644. Germany, coffee, $845, 681; cacao, $877, 605; and balatá rubber, $771,853.

The following table shows by ports of entry the imports and exports for the year 1910, given in bolivars:

	Imports.	Exports.		Imports.	Exports.
	Bolivars.	*Bolivars.*		*Bolivars.*	*Bolivars.*
La Guaira	26, 485, 063. 09	17, 120, 193. 40	Puerto Sucre	216, 029. 00	768, 634. 00
Puerto Cabello	12, 202, 274. 68	18, 655, 163. 40	Cristobal Colon	144, 296. 95	2, 712, 298. 00
Maracaibo	11, 480, 089. 23	24, 618, 350. 85	Guanta	134, 985. 01	145, 620. 00
Ciudad Bolivar	10, 210, 298. 36	21, 837, 597. 73	Pampatar	44, 455. 35	207, 171. 00
Carupano	2, 073, 189. 55	4, 373, 587. 00			
La Vela	772, 395. 14	1, 267, 194. 00	Total	64, 184, 206. 63	92, 997, 777. 38
Caño Colorado	421, 130. 27	1, 291, 998. 00			

The imports to the ports above amounted in weight to 86,360 metric tons, and the exports to 150,988 metric tons.

PRODUCTS AND INDUSTRIES.

Agriculture is a stable source of the wealth of the Republic, but does not represent all of its natural wealth. Gold has been mined since early times. Other metals and minerals are actively worked or are known to exist, but undoubtedly that which has attracted greatest attention to Venezuela are the asphalt mines, in both the east and west of the country.

ASPHALT: We will soon live in the age of asphalt. Already this mineral has a hundred applications in our daily lives, and with an increased knowledge of its possibilities the utility of asphaltum will surely be extended indefinitely. It is as old as the earth. Bitumen was the cement that welded together the stones of the Tower of

Babel, the pitch that calked the ark from the waters of the flood. It is found on the shores of the Dead Sea, and the Egyptians used it in the preservation of their illustrious dead; that it was effective we can judge from the mummies in our museums. The Pyramids are built on asphalt. In fact, we find this curious substance an essential in the construction work of the earliest civilizations.

The etymology of the word "asphalt" is unknown, being lost in the mists of the world's morning, but the actual ingredients of the matter are common scientific knowledge. Asphalt, asphaltum, bitumen, maltha, or mineral pitch—different names for the same substance—is an amorphous pitch-like material, black or brownish-black in color, and lustrous, being composed of various hydrocarbons whose proportions vary widely, according to the locality from which the mineral is obtained. It is undoubtedly a product of the decay of vegetable matter, and asphalt commonly, and perhaps always, occurs in connection with rocks containing bituminous matter. It melts at a heat of from 195° to 212° F., and burns with a bright but smoky flame.

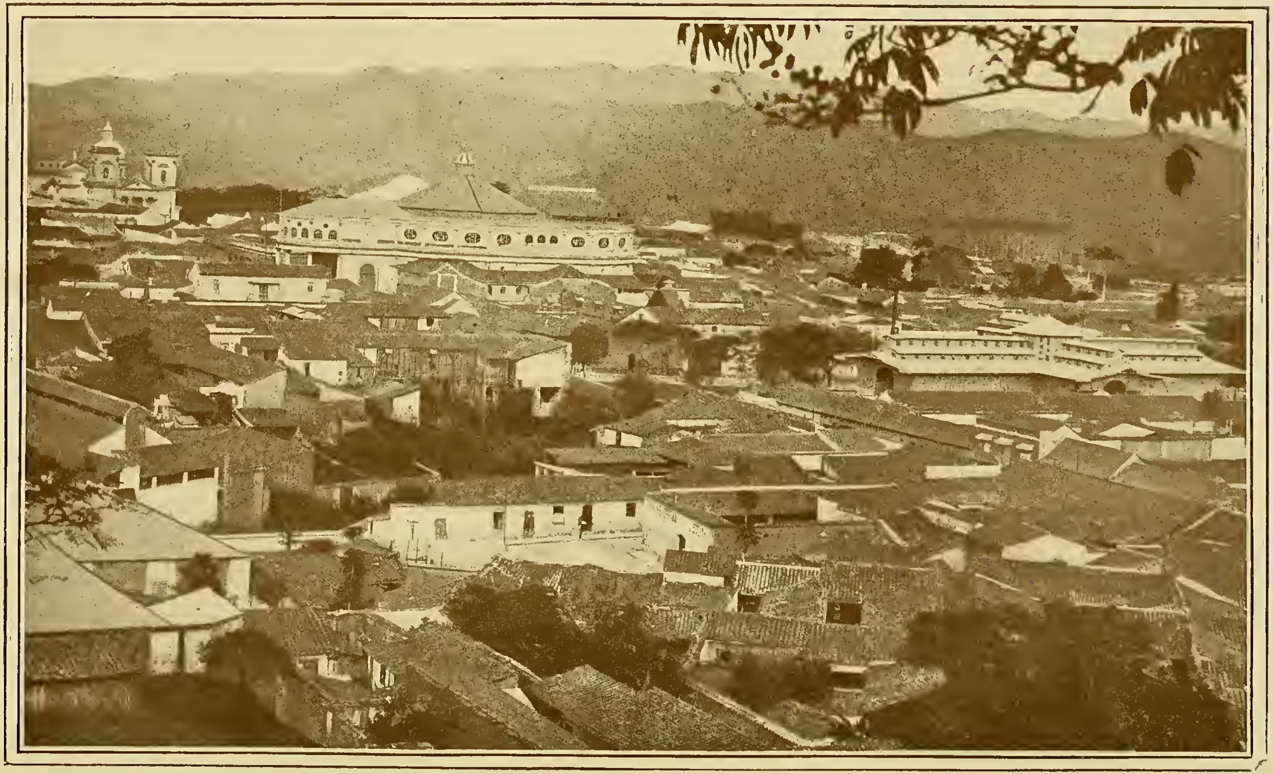
While the "pitch lake" of Trinidad, a surface a mile and a half across of pure asphaltum, is perhaps the most remarkable occurrence of this mineral in nature, still the lake of Bermudez, which covers 1,000 acres in the old State of Bermudez, Venezuela, is fast equaling the first in commercial importance. Asphalt is also found in the Perdenales district, as well as on the shores of Lake Maracaibo, and as an indication of the value of Venezuelan bitumen we have the fact that this special variety is used to protect the tunnels of the New York subway from moisture.

Asphalt as paving is the commonest commercial use of the mineral to-day, and yet its successful employment in the field of road making is of comparatively recent date. The first compressed rock asphalt roadway was laid in Paris in 1854, while it was 1876 before the first similar type of road making was used on Pennsylvania Avenue in Washington. This method of paving, which has done so much for the improvement of our cities, is carried out in the following manner: The asphalt rock in its crude condition is placed in a crusher and reduced to small pieces, and then passed through a disintegrator and reduced to a powder. It then passes through a 20-mesh sieve, nothing being added to or taken from the powder obtained by grinding the bituminous rock. The powder should contain not less than 9 per cent of natural bitumen. The powder is then heated in a suitable apparatus to from 200° to 250° F., and must be brought to the street at a temperature of not less than 180° in carts made for the purpose, and carefully spread to such depth that after having received its ultimate compression it will have a thickness of 2 inches. The surface is rendered perfectly even by tamping, smoothing, and rolling with heated appliances of approved design. This surface should invariably be laid on a foundation of 6 inches of Portland cement concrete. This is the process of asphalt paving which we see going on in most of our large cities nearly every day.

Mineral pitch is extensively used as a roofing, as a waterproofing material, in the composition of varnishes, as a covering for electrical cables, an inner lining of cold-storage plants, in calking the seams of wooden vessels, as a buffer, in the composition of shoeblacking, and in many manufactures where its peculiar characteristics make it applicable. Its value is thus clearly indicated, and it is undoubtedly a great potential source of wealth in several Latin-American countries, especially Venezuela. That curious gaseous flame, the will-o'-the-wisp, which is seen so often in Venezuela, is said by some investigators to be an indication of a vast underground lake of asphaltum. The igneous formation of the terrain lends color to this presumption.

Cuba is another Latin-American country having considerable asphaltum deposits, but the fact that Venezuela, in the face of unfavorable economic conditions, sent 33,000 tons of this mineral to the United States in 1910 is an indication of the future wealth to be derived from the systematic exploitation of asphaltum there.

Coffee is another of the permanent and staple products, and the Venezuela berry has a well-known name abroad for its flavor and character. Over 200,000 acres are



VIEW OF CARACAS FROM "EL CALVARIO" HILL.

Practically the entire city can be seen from the summit of this hill which, not so many years ago, was an arid height. It is now irrigated and ornamented with fountains, statues, trees, and tropical plants, and is traversed in all directions by excellent carriage drives.

planted to coffee, on estates located in the northern and western zones of the country. Both cacao and sugar are grown in quantities, the Venezuelan cacao ranking very high. A good grade of cotton is cultivated, and is almost altogether consumed in the textile mills operating in Valencia. Rubber and balata are regularly exported.

Venezuela is rich in minerals, gold, silver, iron, copper and salt being mined. Coa deposits are worked in the States of Zulia and Merida, and they are known to exist in the State of Falcon, where the railway from La Vela to Coro is used to develop them. Pearl oyster beds off the island of Margarita have been worked since the earliest times. Salt is mined in abundance.

The live stock has always been a source of national wealth, as cattle raising has been a long recognized native industry, but the extensive llanos toward the south and in the drainage area of the Orinoco River will, when better utilized, make of Venezuela one of the best grazing lands in America. A modern refrigerating plant lately established in Puerto Cabello has given great impetus to the raising of cattle for the export meat trade.

RAILWAYS AND INTERIOR WATERWAYS.

The total length of railways in operation in the Republic is 542 miles (872 kilometers). The number of lines, according to latest information, was 12, with an invested capital of over $40,000,000.

Venezuela resembles Brazil very much more than Argentina in the character of its railway development. There are several points along the coast from which railways extend into the interior, but only in one locality have these lines been connected. In the extreme west there are three lines approaching Lake Maracaibo, but they are independent of each other and serve quite different areas of the country. Passing along the coast there are several short lines, facilitating traffic between the interior and the sea; these, too, bear no relation to each other. The only place in the Republic where an extensive development has taken place is near the capital, Caracas, and the best settled portion of the country. The two most important ports on the Caribbean Sea are Puerto Cabello and La Guaira; from both of these railways pass to the interior, one to Valencia and the other to Caracas. Between these two interior points a third railway has been built, so that this entire rich and productive district is well supplied, comparatively, with active transport facilities.

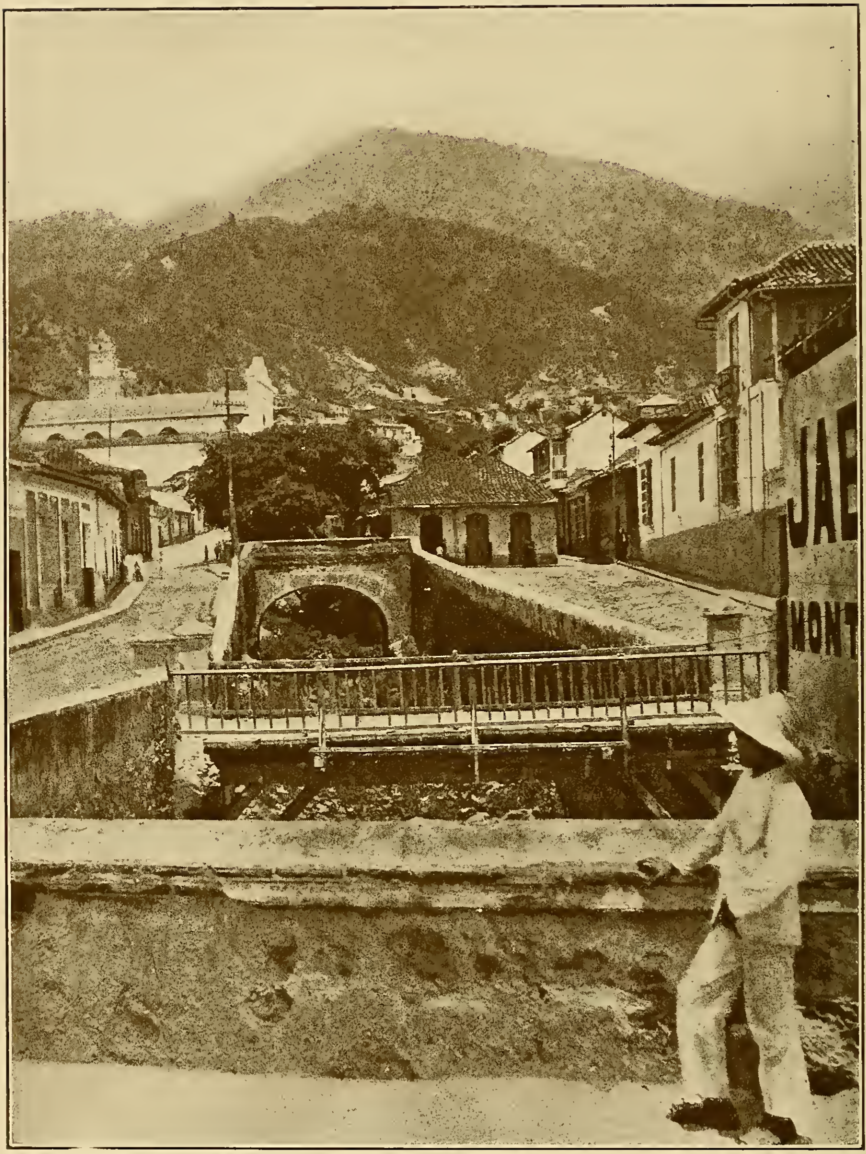
The only railway construction during the year was the extension of the Central Railway to Santa Lucia, about 3 miles of line having been necessary to complete the line to this point.

The total receipts of the various lines during 1910 were 9,239,363 bolivares, with expenses amounting to 6,006,692 bolivares.

A concession was granted for the construction of a railway from the Orinoco River to the town of El Callao, in the mining district. Work must be commenced not later than May 31, 1912, and the entire line must be finished in four years.

Street railways are in operation in the capital, as well as in many of the larger cities, a number of them being operated by electricity.

The waterways of Venezuela form important means of communication and transportation, there being no less than 70 navigable rivers in the country, with a total navigable length of over 6,000 miles, of which the mighty Orinoco, the third largest river in South America, with its tributaries, furnishes nearly 4,000 miles. The more important of the other navigable rivers are the Meta, the Apure, the Portuguesa, the Yaracuy, and the Escalante, all of which are navigated by steamships for considerable distances. The Catatumbo River flows into Lake Maracaibo and is navigable for small steamers, while the majority of the other rivers are navigable for steam launches and flat-bottom boats only.



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A STREET IN LA GUAIRA, SHOWING BRIDGES OVER LA GUAIRA RIVER.

The entrances to the old dungeons were just under the bridge shown in the foreground.

A regular steamship service is maintained on the Orinoco, Apure, and Portuguesa between Ciudad Bolivar, the principal port on the Orinoco, and the interior, as well as points along the coast. Ocean-going vessels enter Lake Maracaibo, which covers an area of 8,000 square miles, and is navigable in its entirety. Lake Maracaibo is connected with the Gulf of Venezuela and the Caribbean Sea by means of a strait 34 miles in length and from 5 to 9 miles wide. Numerous other lakes are found throughout the country, Lake Valencia being the most important of these, owing to its favorable situation between Puerto Cabello, La Guaira, and Caracas. It is navigated by small steamers.

THE PRESS OF VENEZUELA.

The beginning of independent intellectual life in Venezuela can be dated from 1696, when there was founded in Caracas the college of Santa Rosa, which later became the university, to be held as of the same rank as that of Salamanca, among the noblest in Spain.

For the next century the people of the Province had to struggle both for their political and their intellectual freedom, and the former could not be obtained unless the latter was secured. It was therefore the patriots of the revolution who founded the national journalism. They were earnest men, many of them educated partly in Europe—Spain—with the rigid scholasticism of the time, but they imbibed while there the fermenting ideas concerning social and political organization. The literary elegance is traceable in their style and their intellectual convictions in their words.

The first periodical publication to be issued in Venezuela was dated October 24, 1808, in Caracas. This was the *Gazeta de Caracas*. Its character was essentially political and controversial, and its columns were open to all who had the literary ability to use them. The paper had its commercial and news side, however, and lasted, with frequent changes of editors, until the independence of Venezuela had been practically wrested from Spain in 1821. In 1811 the press of the country was represented by *La Gazeta*, *El Mercurio Venezolano*, *El Semanario de Caracas*, and *El Publicista*. In 1812 another was added in the city of Cumana.

In 1818 there was founded in Ciudad Bolivar a small periodical called *Correo del Orinoco*, its first number appearing on June 28, and it kept alive for four years. In 1821 Maracaibo saw its first paper; Puerto Cabello in 1826. From then on to 1840 journalism devoted itself to literary and artistic endeavors. In the latter year national journalism began a renewed activity for liberal ideas, and with varying opportunities for discussion this has been maintained, although greater freedom of the press would have been welcomed by those who believe in unrestricted speech.

The literary character of the periodicals of Venezuela has always been their distinguishing feature, and they show the marks of careful editing and selection, although they do not always carry what a foreigner desires in the way of news. The best example of this spirit, as it indicates perhaps the preferences of the reading public of Venezuela, is the illustrated biweekly *El Cojo Ilustrado*, which has been published in Caracas since 1880, living through many vicissitudes, great constitutional or political changes, and has persistently been held to a high plane of art, literature, and science. *El Cojo* is really an institution in the life of Venezuela.

The large cities like Puerto Cabello, Maracaibo, Valencia, and Ciudad Bolivar have daily newspapers of their own, giving considerable attention to local affairs, reproducing whatever they can obtain on foreign matters, and they allow abundant space to advertising. Caracas, of course, being the national capital, has the largest number of periodical publications, which include several weeklies and monthlies. The daily newspapers are as a rule about 18 inches by 22½ inches, but others are smaller, or about magazine size in the United States. The circulation of the Caracas papers varies from 2,500 to 8,000, but in the other cities 1,000 copies seems to be a satisfactory edition.

The advertising rates are usually estimated on the basis of the square inch, and are higher or lower according to the column and page occupied. The minimum price is about 10 cents gold per square inch each insertion, the maximum price about $1 gold, with discounts for furnished cuts, continued insertions, or regular contracts.

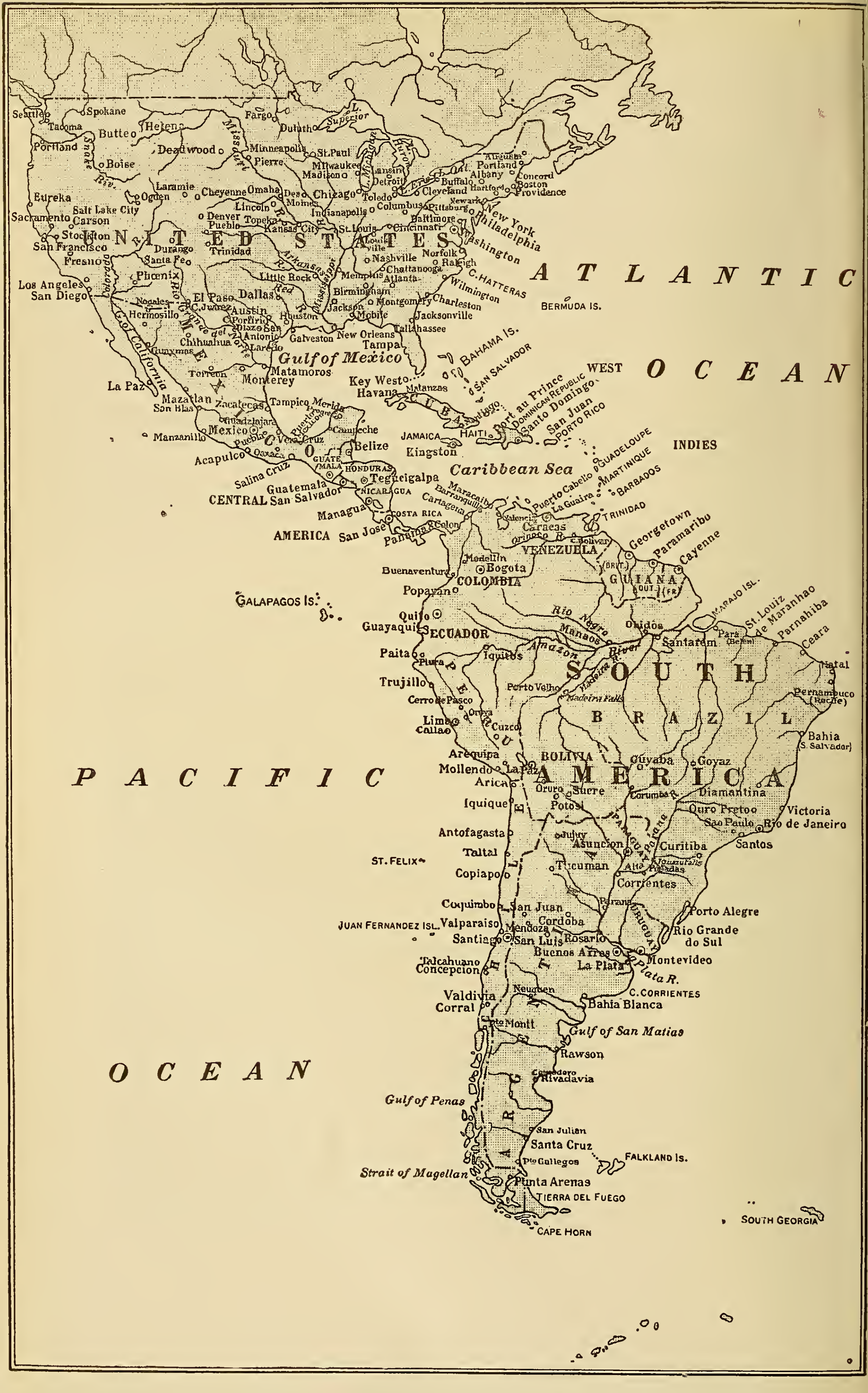
In addition to this part of the press, which gives as much of the general news as possible, there are other periodic publications of a very high rank indeed. These restrict themselves to scientific, literary, and commercial topics. Among them should be mentioned *La Gazeta Medica*, *Anales de la Universidad*, and *El Heraldo Industrial* as recognized authorities in their separate fields. They carry advertisements also, and are frequently as satisfactory media as any through which to reach the public.

POSTAL, PARCEL-POST, AND MONEY-ORDER CONVENTIONS

Country.	Special postal convention.	Parcel-post convention.	Money-order convention.
Argentina			Indirect exchange through Belgium.
Bolivia		Jan. 9, 1902	June 20, 1901; Oct. 12, 1901.
Brazil		Mar. 31, 1911	
Chile		Dec. 7, 1898	Aug. 12, 1897; Dec. 18, 1903.
Colombia		Jan. 19, 1889	
Costa Rica		Mar. 27, 1890	June 6, 1903; July 26, 1903.
Cuba	June 20, 1903		July 8, 1908.
Ecuador		Jan. 2, 1907	
Guatemala		Dec. 4, 1899	
Haiti		Feb. 27, 1911	
Honduras		July 18, 1896	June 25, 1896; July 16, 1896.
Mexico	June 21, 1887	Apr. 28, 1888	Feb. 2, 1909; Mar. 8, 1909.
Nicaragua		Mar. 28, 1900	
Panama	June 19, 1905		
Peru		May 29, 1906	Aug. 8, 1903; Sept. 12, 1903.
Salvador		June 21, 1889	Feb. 2, 1893; Apr. 7, 1893.
Uruguay		June 5, 1908	Apr. 16, 1910; July 11, 1910.
Venezuela		May 2. 1899	

The special postal conventions here indicated are substantially all the same in context, and extend the domestic letter rate of 2 cents an ounce or fraction thereof to these countries. They also provide that articles of every kind or nature which are admitted to the domestic mails of either country, with certain specific exceptions, shall also be admitted to the mails exchanged under these conventions, subject to such regulations as the postal administration of the country of destination may deem necessary for sanitary purposes to protect its customs revenues or its taxes on commerce.

The parcels-post conventions are also practically the same in tenure for all countries, the chief points of difference being in the size and value of the packets subject to the regulations of each particular convention. These treaties, moreover, do not affect arrangements existing under the Universal Postal Convention. In substance, the parcels-post conventions provide for the admission to the mails exchanged articles of merchandise and mail matter (except letters, postcards, and written matter) of all kinds that are admitted under any conditions to the domestic mails of the country of origin. Certain classes of mail matter are, however, specifically prohibited admission to the mails exchanged under the conventions.


Seattle
Spokane
Tacoma
Butte
Helena
Portland
Snake Riv.
Boise
Deadwood
Missouri
Fargo
Duluth
L. Superior
Minneapolis
St. Paul
Pierre
Milwaukee
Madison
L. Michigan
Huron
Lansing
Detroit
L. Erie
L. Ont.
Augusta
Portland
Albany
Concord
Boston
Providence
Hartford
Buffalo
Cleveland
Eureka
Laramie
Ogden
Cheyenne
Omaha
Des Moines
Chicago
Toledo
Sacramento
Salt Lake City
Carson
Lincoln
Denver
Topeka
Pueblo
Kansas City
Indianapolis
Columbus
Pittsburg
Newark
New York
Philadelphia
Baltimore
Stockton
San Francisco
UNITED STATES
St. Louis
Cincinnati
Louisville
Washington
Durango
Trinidad
Arkansas
Nashville
Norfolk
Raleigh
Fresno
Santa Fe
Colorado
Phoenix
Little Rock
Red R.
Mississippi
Memphis
Chattanooga
Atlanta
Birmingham
Wilmington
C. HATTERAS
ATLANTIC
Los Angeles
San Diego
Nogales
El Paso
C. Juarez
Dallas
Montgomery
Charleston
BERMUDA IS.
Hermosillo
Rio Grande del Norte
Austin
Porfirio Diaz
San Antonio
Houston
Jackson
Mobile
Jacksonville
Chihuahua
Laredo
Galveston
New Orleans
Tallahassee
Guaymas
G. of California
MEXICO
Tampa
BAHAMA IS.
SAN SALVADOR
Torreon
Monterey
Matamoros
Gulf of Mexico
WEST
OCEAN
La Paz
Key West
Havana
Matanzas
CUBA
Santiago
Port au Prince
DOMINICAN REPUBLIC
Santo Domingo
San Juan
PORTO RICO
Mazatlan
San Blas
Zacatecas
Tampico
Merida
Progreso
Puerto Mexico
Campeche
Guadalajara
Mexico
HAITI
Manzanillo
Puebla
Vera Cruz
JAMAICA
Kingston
INDIES
GUADELOUPE
MARTINIQUE
BARBADOS
Acapulco
Oaxaca
Belize
GUATEMALA
HONDURAS
Caribbean Sea
Salina Cruz
Guatemala
San Salvador
Tegucigalpa
NICARAGUA
Maracaibo
Barranquilla
Cartagena
Puerto Cabello
La Guaira
CENTRAL
Managua
COSTA RICA
Valencia
Caracas
TRINIDAD
AMERICA
San Jose
Panama
Colon
Orinoco R.
C. Bolivar
VENEZUELA
Georgetown
Paramaribo
Cayenne
Medellin
Bogota
COLOMBIA
Buenaventura
(BRIT.)
GUIANA
(DUT.)
(FR.)
Popayan
GALAPAGOS IS.
Quito
Guayaquil
ECUADOR
Rio Negro
Manaos
Obidos
MARAJO ISL.
Para (Belem)
St. Louiz de Maranhao
Parnahiba
Ceara
Paita
Piura
Iquitos
Amazon
River
Santarem
SOUTH
Natal
Trujillo
PERU
Porto Velho
Madeira R.
Madeira Falls
Pernambuco (Recife)
Cerro de Pasco
Oroya
Cuzco
BRAZIL
Lima
Callao
Bahia (S. Salvador)
Arequipa
BOLIVIA
Cuyaba
Goyaz
PACIFIC
Mollendo
La Paz
AMERICA
Arica
Oruro
Sucre
Corumba
Diamantina
Iquique
Potosi
PARAGUAY
Parana
Ouro Preto
Victoria
Sao Paulo
Rio de Janeiro
Antofagasta
Jujuy
Asuncion
Santos
Taltal
Curitiba
ST. FELIX
Copiapo
Tucuman
Alta
Iguazu Falls
Posadas
Corrientes
CHILE
Coquimbo
San Juan
Parana
URUGUAY
Porto Alegre
Valparaiso
Cordoba
JUAN FERNANDEZ ISL.
Mendoza
Rio Grande do Sul
Santiago
San Luis
Rosario
Buenos Aires
Montevideo
Talcahuano
Concepcion
La Plata
Plata R.
ARGENTINA
C. CORRIENTES
Valdivia
Corral
Neuquen
Bahia Blanca
Pto. Montt
Gulf of San Matias
Rawson
OCEAN
Comodoro Rivadavia
Gulf of Penas
San Julian
Santa Cruz
FALKLAND IS.
Pto. Gallegos
Strait of Magellan
Punta Arenas
TIERRA DEL FUEGO
SOUTH GEORGIA
CAPE HORN

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Au Libèrateur José de San Martin
La République Française
Roll

JOSÉ DE SAN MARTIN.

Reproduction from the beautiful painting by Alfredo Roll, exhibited in the salon of the National Society of Fine Arts, Paris.

BULLETIN
OF THE PAN AMERICAN UNION

VOL. XXXIII AUGUST, 1911 NO. 2

IN this issue of the Bulletin appears the second section of the "Annual review" of the countries comprehended in the Pan American Union. As announced in the July number, it contains the data for the remaining 13 countries not included in the first section. In many cases it was impossible to obtain and systematize the necessary data for the compilation of the different countries in time actually to distribute the Bulletin on its usual date. This has caused some delay in the publication of the review, but was clearly unavoidable. Moreover, many of the Latin American Republics do not have their statistical data in such form as to be available before the middle of July, while in two distinct instances additional data were received after the publication had gone to press, but in the endeavor to make this review the latest and most authentic volume of its kind, the Bulletin was recalled and subjected to another revision. This "Annual review," appearing in the July and August issues, taken as a whole, is the most complete study of all America, along industrial, commercial, and general lines which has ever been published, and should prove most useful and valuable for consultation and reference. The material published in July and August will reappear in summarized form in the Spanish, Portuguese, and French sections. This will necessarily entail a corresponding delay in these editions, because the material must be carefully translated. In an early number of the Monthly Bulletin there will appear a résumé of the reviews of all the countries. This will give an excellent idea of the commerce, industries, progress, and development of the 21 American Republics taken as a whole, and also of their relations with each other.

Since the distribution of the July issue there has come to the Pan American Union a number of letters of congratulation on the contents and appearance of the first section of the "Annual review." These communications, coming from men in official, commercial, and private life, and commenting most favorably on the artistic typographic arrangement, the carefully selected illustrations, and the new features which have been introduced, are a source of extreme gratification to the staff, who have put their best efforts into this work.

It is also a satisfaction to note the favorable reception which has been accorded the Portuguese and French numbers of the Bulletin. Both these foreign editions made their initial appearance as separate editions, in the July issue, and the splendid illustrations embellishing each, together with the carefully edited articles and Latin American notes, have already been the subject of wide newspaper mention.

BOLIVIA

The Republic of Bolivia, the third largest of the South American Republics, is one of the two countries of the American continents which possesses no seacoast. It extends over an area of 708,195 square miles and has a population of 2,267,935, or 3.2 per square mile, being the most sparsely populated of any of the American Republics.

The vast plateau which includes over 40,000 square miles, at an average altitude of 12,000 feet above sea level, and on which are situated most of the larger cities of the Republic, is the most noted topographical feature of the country.

The mountains abound in mineral wealth. Tin, silver, copper, and bismuth, with rubber, are the principal exports. Coffee, cacao, tobacco, sugar cane, and other products of the Tropical as well as many of the Temperate Zone are successfully cultivated; coca, from which cocaine is derived, is raised and exported in large quantities, and the forests contain numerous species of valuable woods, including rubber and cinchona trees, the bark of the latter being used for the manufacture of quinine.

COAT OF ARMS OF BOLIVIA.

Under the constitution which was promulgated on October 17, 1880, the Republic has a democratic representative form of Government. Governmental powers are delegated to three distinct and coordinate branches—legislative, executive, and judicial.

The Legislature consists of two Houses, the Senate and Chamber of Deputies, the former consisting of 16 and the latter of 75 members, both Houses being elected by popular vote, the former for six and the latter for four years. Every male citizen over 21 years of age, whose name appears on the electoral register, who can read and write, and who has a fixed independent income, has the right to vote. The Senate is renewed by thirds every two years and one-half of the Chamber of Deputies is renewed every four years. Congress meets annually at La Paz, the actual capital, on August 6, the session lasting for a period of 60 days, which may be extended for 30 days. It may also be convened in extraordinary session by the President of the Republic.

The President and two Vice Presidents are elected for a term of four years and may not be reelected for the term immediately following. The annual salary of the President is 18,000 bolivianos ($7,200). He is assisted by a cabinet consisting of six ministers, as follows:

President, Dr. Eliodoro Villazón (inaugurated Aug. 6, 1909).

First Vice President, Dr. Macario Pinilla.

Second Vice President, Dr. Juan M. Saracho.

Minister of Foreign Relations and Worship, Sr. Claudio Pinilla.

Minister of the Treasury, Sr. Carlos Torrico.

Minister of Government and Fomento (Promotion), Dr. Juan M. Saracho.

Minister of Justice and Industry, Sr. Arturo Loayza.

Minister of Public Instruction and Agriculture, Dr. Manuel B. Mariaca.

Minister of War and Colonization, Sr. Julio La Faye.

The Department of Foreign Relations and Worship (Ministerio de Relaciones Exteriores y Culto) is intrusted with the maintenance of cordial relations with foreign powers through the diplomatic and consular corps, the settlement of international boundary disputes, and similar matters. It also has supervision and control over the Roman Catholic churches and clergy. One of its functions is that of negotiating with contiguous Republics regarding the construction and maintenance of international railways.

The Department of the Treasury (Ministerio de Hacienda) is in charge of the administration of the public funds and all financial affairs, the preparation of the annual budget, the service of the public debt, and the preparation of commercial statistics; it also controls the customhouses.

PRESIDENT ELIODORO VILLAZON.

The Department of Government and Promotion (Ministerio de Gobierno y Fomento) exercises control over the Departments, Provinces, districts, and municipalities; also over the general elections, the police and fire departments, the post-office and telegraph systems, and all matters of sanitation and hygiene. All railways, waterways, roads, and bridges, and the construction and maintenance of public buildings, waterworks, drainage, and sewerage systems are under its charge.

The Department of Justice and Industry (Ministerio de Justicia y Industria) has charge of all matters pertaining to the courts, lawyers, notaries public, etc., as well as of penal institutions. The promotion and regulation of commerce and industries, as well as mines and minerals, the administration of the tobacco and match monopolies, and the patent and trade-mark office, are also delegated to this department.

The Department of Public Instruction and Agriculture (Ministerio de Instrucción y Agricultura) supervises the public and private schools, also special educational institutions, such as the National School of Commercé, the National School of Mines, the Conservatory of Music, and the Academy of Painting. The promotion of agriculture is under its jurisdiction as well as the various agricultural schools, the Model Farm, the National Institute of Veterinary Science, and the National Museum.

The Department of War and Colonization (Ministerio de Guerra y Colonización) is charged with the maintenance and instruction of the army, including the reserve, and of the arsenals and schools of instruction for military purposes. The military geographical commission, which prepares maps and surveys of the country, and the numerous societies for target practice are also subject to its jurisdiction. The same department administers the national territory of colonias as well as the various agricultural colonies established throughout the country, promotes and regulates immigration, and controls the sale and rental of public lands.

The judiciary consists of one national supreme court composed of seven judges, the superior district courts (one in each Department), also provincial and parochial courts.

The law of February 5, 1910, provides for a standing army of 3,153 officers and men. Military service is compulsory, all citizens between the ages of 20 and 50 years being compelled to serve first in the regular and later in the reserve forces.

The postal service comprises over 200 offices, operated by some 300 employees, who handle more than 3,000,000 pieces of mail matter annually. The extent of telegraph lines, both public and private, is 5,007 kilometers (3,111 miles), operated by about 125 offices. Material for a telegraph line between Uyuni and Tupiza was purchased during 1910, and the Federal Congress authorized the President to issue bonds to the amount of $240,000 for establishing wireless telegraph stations at La Paz, Riberalta, or Villa Bella, Cobija, Trinidad, Santa Cruz, Puerto Suarez, and Gran Chaco.

The Republic is divided into eight Departments, which are again divided into Provinces, the latter into cantons or districts, and these again into municipalities. Congress at the close of 1910 authorized the creation of an additional Department to be known as the "Departamento de los Chiquites," the capital of which will be Puerto Suarez on the Paraguay River. The Departments are governed by prefects, appointed by the President for a term of four years, while the Provinces are governed by subprefects, also appointed by the President.

BOLIVIA IN 1910.

Every movement during the year 1910 was a permanent step forward for Bolivia. Once or twice questions have arisen with neighboring republics concerning boundaries, but these are all being adjusted in an amicable manner, so that no disturbance of public peace has occurred. With the rest of the world most cordial relations have been maintained, and the Government is exerting its best efforts to make them closer by accrediting new legations and entering into favorable new commercial treaties.

The economic year has resulted very creditably to the country. The prudent conduct of Congress in voting promptly the expenses for the budget, allowed the strictest balance of the necessary expenses of the Government. Foreign obligations have been met with promptness, and the national credit has established itself on a firm basis. The small external debt which the nation assumed recently has been well provided for, so that its existence offered no hindrance to the country's progress. Since the income of the Republic is increasing, the adjustment of such a debt is a relatively easy matter for the treasury.

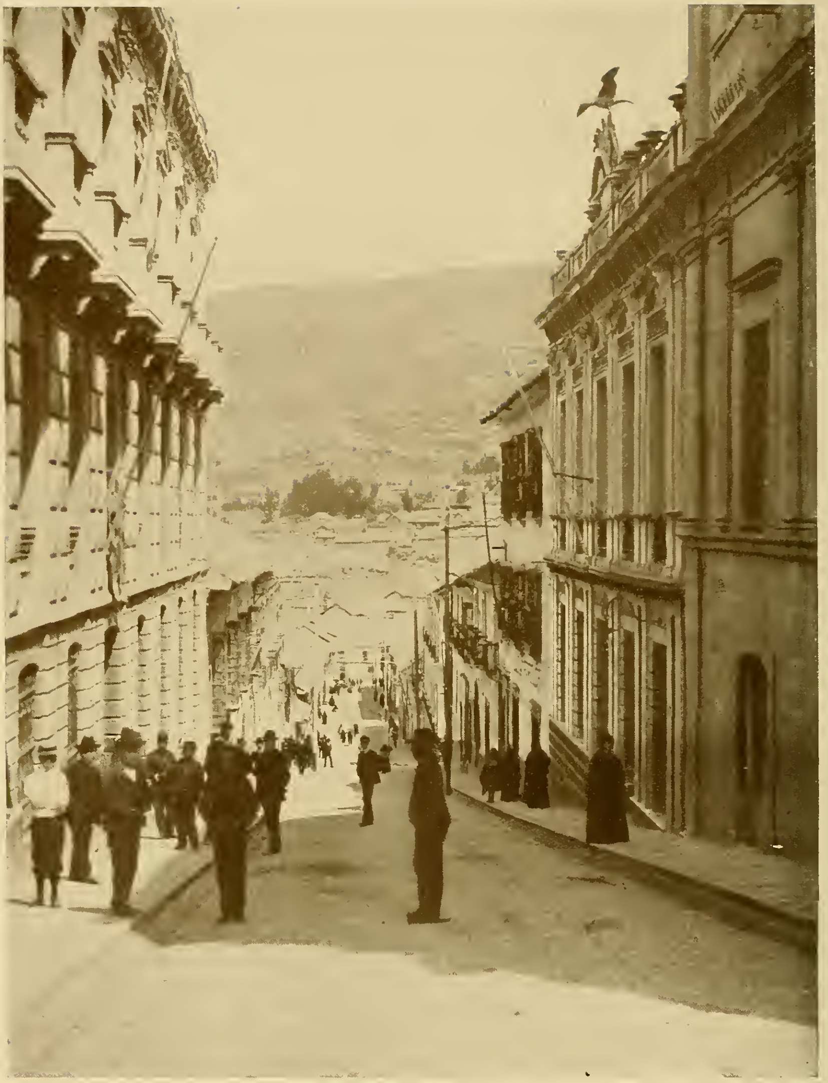
Commercially speaking, gains are to be noted. The exports in 1910 were greater than in 1909, the balance of trade remaining with Bolivia, while imports showed a proportionate gain. The railway policy of previous years was uninterruptedly continued, because for the commercial development of the country both internal and external means of communication are vitally necessary. It will not be very long, therefore, with the present activity shown, until the traditional isolation of Bolivia will be entirely overcome and the country be made approachable actually from every direction, while from one center of industry to another within the country good roads will be available.

The mines have increased their output in 1910, and new studies for future development are making. In agricultural matters there is still a backward condition, due partly to the fact that so much of Bolivia's history has been worked out in relation to its mineral rather than to its agricultural wealth. This is being overcome, however, and the agricultural department was particularly active in 1910. Rubber, cacao, coca, and coffee are naturally products of the country, but there are immense areas suitable for grains and cattle. To give scientific foundation to a systematic progress in these matters, an agricultural school was established, by which Bolivia purposes to use its fields as well as its mines for future industries.

FINANCE.

The Pan American Union has as yet received no official statement of the expenditures of the year 1910 and only a partial statement of the receipts, covering import and export customs duties.

The "Review of the Ministry of Finance," January, 1911, gives the total of customs duties collected on imports in 1910 at 5,491,614 bolivianos. The budget estimates were 6,485,000 bolivianos—993,386 bolivianos more than the amount actually collected. The receipts from this source for 1909, however, amounted to only 4,714,929



AYACUCHO STREET, LA PAZ, BOLIVIA.

bolivianos. There was, therefore, an increase of import duties for the year 1910 of 776,685 bolivianos.

The amount collected from export duties for 1910 was 3,433,997 bolivianos. The budget estimate was 2,594,100 bolivianos. The amount collected from this source in 1909 was 2,619,612. There was, therefore, an increase over the estimated receipts of 837,897 bolivianos and over the receipts of the preceding year of 814,385 bolivianos.

The figures published are subject to corrections when complete reports are received.

DEBT.

The statement in the "Review of Ministry of Finance" gives the internal debt as entered in the books of the treasury on December 31, 1909, at 5,435,026.75 bolivianos, and as registered during the year 1910, 393,044.04 bolivianos, a total of 5,828,070.79 bolivianos.

Of this sum, internal bonds were issued up to December 31, 1910, amounting to 4,178,966.02 bolivianos.

The amount of military-compensation bonds not redeemed on December 31, 1910, was 170,800 bolivianos.

FOREIGN DEBT.

The foreign debt consists of two issues of bonds:

The Morgan loan of December, 1908, of £500,000. The amount of £40,000 required for interest and amortization has been punctually met.

The loan authorized by the law of February 3, 1910, of £1,500,000 for the establishment of the national bank, port drainage and water works, and for railway surveys. This loan was placed in Paris at 5½ per cent interest for the first 10 years and 5 per cent for the remaining 25 years with 1 per cent amortization.

For the service of this loan there will be required, for the first 10 years, £82,500 interest and £15,000 for sinking fund, a total of £97,500; and, for the remaining 25 years, £75,000 interest and £15,000 sinking fund, a total of £90,000. This loan is secured by the export duties on metals (principally tin) and rubber.

FOREIGN COMMERCE.

The total foreign trade for the year 1910 amounted to 121,066,556 bolivianos, of which 46,500,000 bolivianos (estimated) were imports and 74,566,556 bolivianos were exports.

The figures for the preceding year as corrected were: Imports, 36,936,940 bolivianos; exports, 63,764,467 bolivianos; total, 100,701,407 bolivianos. This shows an increase of imports, 9,563,060 bolivianos; exports, 10,802,089 bolivianos; and total, 20,365,149 bolivianos.

As yet no figures for the last three months of the year 1910 in imports are available.

For the nine months the imports were of the total value of 32,498,695 bolivianos, as compared with the first nine months of 1909 of 24,922,415 bolivianos.

At the same rate of increase for the three months lacking, as for the nine months known, the imports would amount to a total of about 48,000,000 bolivianos. However, estimated by comparing the amount of customs duties collected in 1910 and in 1909 it would appear that this estimate is a little too high, so that the figure given above is believed will prove to be more nearly correct.

The value of the boliviano is approximately 39 cents in United States gold (12½ bolivianos=£1—). On this basis the figures represent, in United States gold, for for the year 1910, imports, $18,135,000; exports, $29,080,957; total, $47,215,957. 1909, imports, $14,405,407; exports $24,868,142. Increase 1910 over 1909: Imports, $3,729,590; exports, $4,212,818; total increase, $7,942,408.

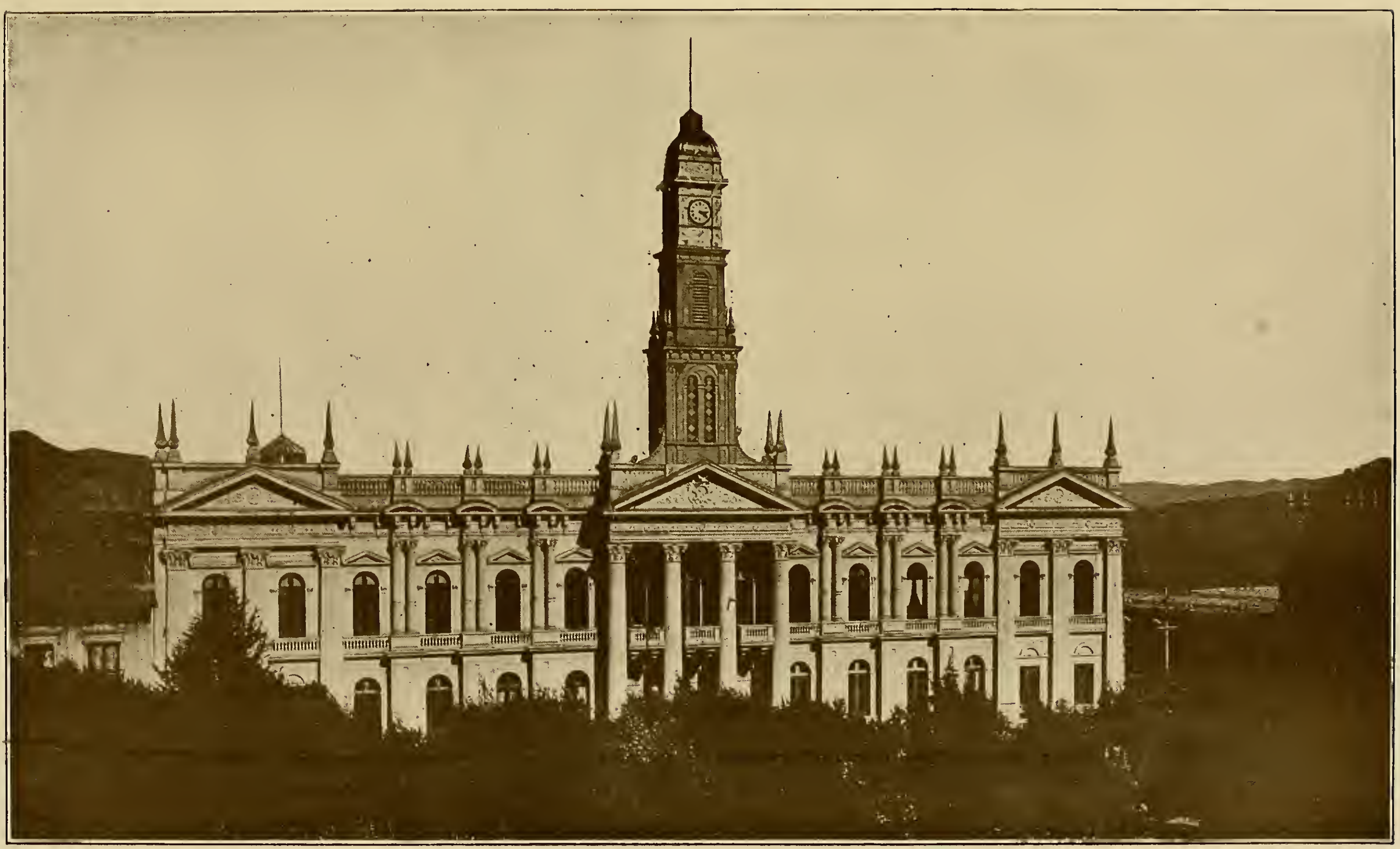
IMPORTS.

The imports for the three years 1908, 1909, and 1910 (1910, January to September, inclusive), by countries, were as follows:

Countries.	1908	1909	January-September 1910.
Germany	$3,980,937	$1,644,154	$2,487,824
United States	3,184,010	4,240,706	1,241,925
United Kingdom	2,569,499	3,078,796	5,060,452
Chile	1,462,530	1,290,465	1,327,121
France	1,038,004	577,062	251,773
Argentina	930,579	659,570	477,593
Italy	555,190	388,762	221,593
Belgium	545,601	611,545	843,675
Peru	459,082	988,249	649,276
Spain	125,646	116,174	52,580
Uruguay	44,809	88,249	29,505
Brazil	43,698	92,359	17,384
All others	946,107	620,316	23,790
Total	15,885,692	14,405,407	12,684,491

The imports for the first nine months of 1910, by articles and classes, is shown in the following table:

	Bolivianos.
Animals and animal products:	
Live animals	956,452
Meat	232,343
Alimentary products	175,630
Industrial products	895,868
Medical products	1,950
Leather goods	170,067
Shoes	91,043
All others	110,919
Vegetable products:	
Textile fibers	3,606
Manufactures	5,973
Alimentary products	4,530,042
Industrial products	1,094,009
Medical products	7,031
Plants and trees	9,860
Wood	174,056
Manufactured	439,137
Manufactured with other materials	92,213
Furniture	133,447
Various	93,914
Metals, earths, and stones:	
Gold	7,387,750
Metal and minerals	46,078
Manufactures	1,251
Copper metal	23,607
Manufactures	41,929
Tin, lead, and zinc	18,628
Manufactures	166,640
Various	8,135
Iron and steel	3,533,939
Manufactures	537,835
Construction steel	1,237,566



THE CAPITOL AT LA PAZ, BOLIVIA.

The new Executive Palace, while but two stories in height, is much more spacious than the one it replaces. It faces the principal plaza of the city, and is one of the handsomest modern buildings in La Paz.

	Bolivianos.
Metals, earths, and stones—Continued.	
Earths and stones	14, 590
Products	122, 583
Manufactures	32, 583
Crystal, chinaware, glass, porcelain	179, 589
Textiles and manufactures:	
Yarns and thread	183, 998
Tissues	3, 554, 402
Various	264, 513
Paper and manufactures:	
Paper and pasteboard	8, 342
Manufactures	378, 708
Drugs and pharmaceutical products	239, 695
Beverages	939, 449
Machinery, apparatus, and implements	803, 563
Vehicles	81, 646
Arms and explosives	3, 275, 510
All others not specially classified	202, 606
Total bolivianos	32, 498, 695
United States (gold)	$12, 634, 491

EXPORTS.

The following table shows the exports by countries for the years 1909 and 1910:

Countries.	1909	1910	Countries.	1909	1910
United Kingdom	$14, 166, 541	$18, 055, 406	Argentina	$283, 421	$155, 954
Germany	4, 493, 879	6, 015, 390	United States	29, 459	62, 438
France	3, 168, 827	2, 009, 527	Uruguay	56, 784	56, 917
Belgium	719, 597	1, 486, 735	All others	408, 535	5, 486
Brazil	1, 004, 100	962, 108			
Chile	536, 999	270, 996	Total	24, 868, 142	29, 080, 957

By articles, the exports for the same two years were:

	1909	1910		1909	1910
Mineral products:	*Bolivianos.*	*Bolivianos.*	Animals and products:	*Bolivianos.*	*Bolivianos.*
Tin	31, 654, 109	37, 006, 503	Hides	199, 571	218, 163
Copper	1, 641, 201	1, 786, 952	Wool, sheep	15, 063	16, 127
Bismuth	1, 451, 075	1, 923, 417	Goatskins	9, 027	16, 503
Silver	5, 721, 915	5, 264, 440	Chinchilla	620	16, 250
Gold coin	128, 612	7, 187	All others	21, 042	38, 331
Silver coin	227, 000	5, 501	Manufactured products	51, 745	61, 713
Wolfram	95, 583	210, 061			
All others	270, 814	512, 263	Reexportation of foreign merchandise	47, 265	117, 402
Vegetable products:			Miscellaneous	13, 533	71, 389
Rubber	21, 947, 138	26, 825, 230			
Coca	230, 832	420, 105	Total (bolivianos)	63, 764, 467	74, 566, 556
Quinine	17, 021	24, 577			
All others	21, 301	23, 952	United States (gold)	$24, 668, 142	$29, 080, 957

PRODUCTS AND INDUSTRIES.

It is upon her mineral wealth that the Republic mainly depends, and present conditions all point to increased activity in the exploitation of these resources through the constantly increasing foreign demand for the mineral products of the country.

The mineral wealth of Bolivia, including nearly all known metals, is widely distributed and very rich and abundant. Great veins of ore containing the precious metals are found in the mountains of the Republic, and while their exploitation is carried on on a considerable scale, yet, due to the lack of labor, capital, and adequate transportation facilities, they are not fully developed, and in many instances remain entirely virgin. The tin, copper, and bismuth mines of the Republic are among the richest in the world.

From 1540 to 1750, a period of 210 years, the gold mines of Bolivia produced $2,100,000,000. From 1750 to the beginning of the nineteenth century the mines and placers situated in the Provinces of Larecaja and Caupolican produced $14,000,000 gold, and from 1818 to 1868 the output was valued at about $3,000,000. The product of the other mines and placers of the nation, from the middle of the eighteenth to the latter part of the nineteenth century, is estimated at $125,000,000. The annual gold production of Bolivia may be calculated at 17,460 troy ounces, which, at $20 an ounce, gives a value of $349,200.

Photograph by George W. Dean.

A TIN MINE IN THE ORURO DISTRICT OF BOLIVIA.

TIN: Bolivia produces one-quarter of the total tin output of the world. Recently tin sold for $1,000 a ton. The wealth accruing to the Andean Republic from this source would be a simple arithmetical problem if this price was constant. Fortunately, during the past few years the value of a ton of tin has never gone much below $750, and at that price the Bolivian tin miner is assured a good profit despite the difficulties of transportation.

Tin, as a component of bronze, had its uses as a metal thousands of years prior to the most remote recorded history. As to when it first assumed a separated characteristic composition we have no exact information. In the first century it was definitely known to the Greeks, but it may have been in existence in the days of Moses. At a somewhat later period of the Jewish history it is supposed to have been brought by the ships of Tarish from islands east of the Persian Gulf. The Phoenicians, those early indefatigable traders credited with the discovery of Albion, were the first who found tin in Cornwall, whence they carried it to Italy. The Romans, however, confused tin with lead, calling the former white and the latter black lead. The Latin word stannum did not definitely mean tin until the fourth century.

This metal, or rather tin stone, as the native oxide is called, has a very limited distribution on the earth's surface. The Malay Straits country, the Island of Banka, a limited area in India, and Australia, with Cornwall and Bolivia, are the few places where it is found in sufficient quantities to make the exploitation of tin profitable. Small deposits are found in Alaska, some of the United States, Mexico, Colombia, Peru, while considerable "cassiterite," another name for tin ore, has been dug up in the mineral region of Argentina.

The characteristics of tin are its pure silver-white brilliant color; its flexibility—a remarkable crackling noise is produced upon bending tin; its malleability—tin foil, which is the beaten metal, being hammered out to $\frac{1}{1000}$ part of an inch in thickness; and its quality of hardness, which is somewhere between that of gold and lead. It is ductile, capable of being drawn out into wire, and has little tenacity. Exposed to the elements, it loses its bright color and becomes dark gray. It finds its greatest use as an alloy of other metals.

In extracting the metal the first process is grinding the ore. This ground ore is then washed in order to remove the impurities, the specific gravity being so high that the earthy matter and even some of the foreign metallic ores present are easily eliminated in the washing process. In order to remove other extraneous matter of nearly the same specific gravity, the ore is roasted in a reverberatory furnace and the sulphur and arsenic thus expelled. The ore, thus freed from foreign matter to a certain extent, is mixed with the requisite fuel and limestone and is again subjected to great heat in the reverberatory furnace, in order to bring the whole into a state of fusion, which should continue for about eight hours. The lime unites with the remaining earthy matters in the ore and flows off into a liquid slag, while the coal reduces the oxide tin to its metallic state. The tin thus obtained must, however, be further refined in order to produce the pure metal that commands the highest price.

The uses of tin are limited, but unique. The unalloyed metal is used in making pharmaceutical apparatus and certain infusion pots and evaporating basins of special service. Two varieties of tinfoil are also the product of pure tin—one that serves to silver mirrors and the other as a wrapping for chocolates, tobacco, chewing-gum, and so forth. Making tinfoil is the simple process of hammering out the pure tin into thin sheets with a wooden mallet. Before the introduction of agate ware and other similar compositions tin was largely utilized for cooking and domestic vessels and found favor for this purpose because it was proof against the effects of acid liquids, such as lime juice, vinegar, etc., and because it did not tarnish. Utensils of pure tin, however, were very expensive and had to be made very heavy for their several purposes; thus it is the custom to give iron or copper vessels a coating of tin, which gives the article all the good qualities of tin. "Sheet tin" is sheet iron that has been given a coating of pure tin. However, as already stated, by far the greater part of tin produced metallurgically is used for making tin alloys, and in this form it enters into the make-up of almost every article constructed of metal. Gold and silver coins contain alloys of tin, while it is always found in bronze, lead, and pewter.

The extensive use of tin augurs well for the future economical progress of Bolivia, as the only land in the western continent where tin is found and worked in amounts that repay the investment to-day. The tin zone in Bolivia is divided into four districts—La Paz in the north, Oruro in the center, Chotolque in the south, and Potosi in the east. The city of Oruro is the tin metropolis and commercial center of the industry. The most productive mine in the country is that of La Salvador, which has an output varying from 60 to 90 tons a month. The mining country is much in the Cordillera Real Range, and the lodes are found at altitudes of from 11,000 to 16,000 feet, the height of one in the Monte Blanco mining section, where the offices of the company are, being 14,500 feet above the level of the sea.

Certain economic factors operate against the highest exploitation of tin in Bolivia, namely, the necessarily heavy freight charges, the dependence on the price of Straits tin, the export duty, and the fluctuation of the Bolivian money. In time these handicaps will be overcome and the proceeds of the tin mines of Bolivia proportionately increased. The 1910 production reached 830 long tons, valued at 30,000,000 bolivianos, or 12,000,000 American gold dollars.

A great impetus has been given the exploitation of coal in the Copacabana Peninsula on the Bolivian side of Lake Titicaca, the deposits of which could, according to official estimates, yield 40,000 tons annually. The Government is devoting considerable attention to the industry, the development of which would result in the establishment of tin smelters in the country. Thus Bolivia, instead of exporting its tin mostly in barrillas, as it now does, would ship it in bars. This would naturally enhance the value of the article, besides furnishing employment to a larger number of laborers.

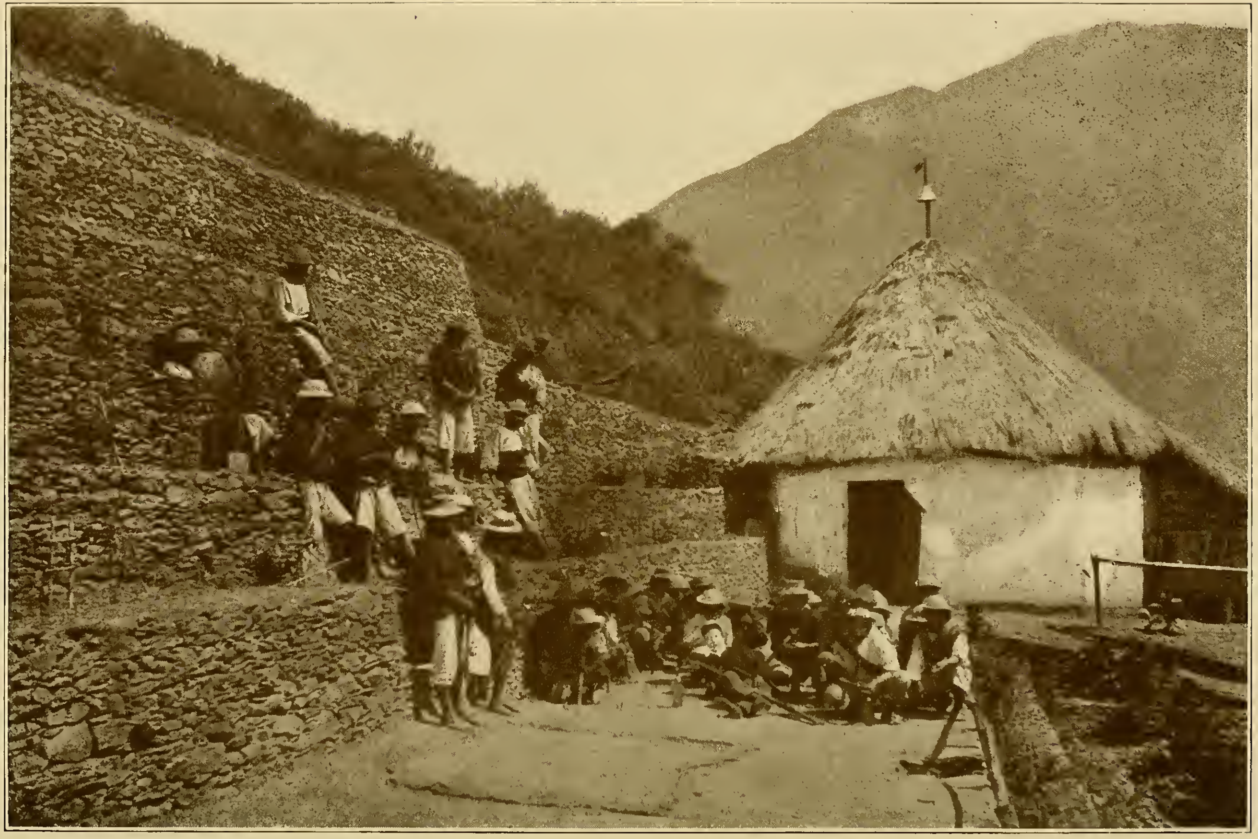
Photograph by George W. Dean.

TIN ORE FROM THE HUAYRA MINE, POTOSI, BOLIVIA.

The piles of ore shown in the picture have been assorted by hand from the rough mine output. Most of this ore will be ground and concentrated by lixiviation, but the richest of it, which may be almost pure cassiterite, is sometimes exported in an untreated state.

The Republic occupies a prominent place among the very few bismuth producing countries, said to be three in all. In Bolivia bismuth is generally exploited with other metals from which its separation is easy. It is found in the mineral zone between Huayna-Potosi, in La Paz, and Chorolque, in Potosi; the principal region is that of Tazna.

It is perhaps a well-known fact that the production of bismuth has been subject to monopoly control. For this reason the prices of bismuth do not undergo any material fluctuations, and it may be noticed that for several years the price of this metal has been maintained at 9,150 bolivianos per metric ton.



INDIAN COCA GATHERERS, BOLIVIA.

The principal coca plantations of Bolivia are in the Yungas Valley. Cocaine is extracted from the leaves, the Indians masticating them to relieve fatigue, hunger, and difficulty experienced in mountain climbing. The shrub is also found in Peru and other parts of South America.

From 1904 to 1909 the bismuth exported from Bolivia amounted to 1,220,824,280 kilos, valued at 7,047,399.60 bolivianos, or an annual average of 203,470,713 kilos, valued at 1,174,566.60 bolivianos. At present 1 quintal of bismuth in bars pays an export duty of 10 bolivianos, and 1 quintal of bismuth in small bars, 7 bolivianos, by virtue of the law of February 9, 1910.

Next to tin the most important product of Bolivia is rubber, the annual export value of which is estimated at $4,000,000. The exploitation of the rubber lands is regulated by law through an annual export tax. The principal areas lie in the northeast, near the Peruvian boundary; in the east, in the Province of Santa Cruz; and in the Acre and Beni territory, which is exceptionally rich in its yield. The Acre territory is watered by several large rivers originating in the Cordillera and flowing into the Amazon. These are the Beni, Madre de Dios, the Orton, and the Acre.

Two varieties of rubber plant are found in this district, the caucho, which has to be cut down in order to extract the sap, and the hevea, which is merely tapped. In some cases the trees are tapped for a period of two years, and are then rested for a similar term. Other rubber trees are tapped for six years at a time and then left untouched for a like period. The trees selected for tapping in this section are usually from 30 to 40 years of age, and are expected to yield for 20 years, after which they become useless.

Cacao and coffee are cultivated in the Departments of La Paz and Cochabamba, while other valuable vegetable products are produced in the Departments of Beni and Santa Cruz. Coca, from the leaves of which the alkaloid of cocaine is produced, is one of the most valuable products of Bolivia. It is cultivated in the lower plateaus and temperate regions of the western watershed of the Andes, at an altitude of 650 to 1,600 meters above sea level. Bolivian coca commands a high price in foreign markets on account of its superior quality. Upland rice is grown to some extent, but not in sufficient quantity to satisfy the local demand. A large area of the Republic is well suited to the cultivation of wheat, which might be grown in quantities sufficient to meet the needs of the home market, but as yet this branch of agriculturel development has been but little studied. The present Government, impressed with the importance of stimulating agriculture in the Republic, has imported wheat of superior quality from the United States and Argentina for the purpose of supplying a high grade of seed to home growers.

Cattle, sheep, and llamas are abundant, and to encourage the live-stock industry of the country there is a national veterinary institute and a recently established agricultural school. There are several breweries in the country and a shoe factory; also many minor industrial establishments.

RAILWAYS AND INTERIOR WATERWAYS.

The extent of the railways in operation of Bolivia, according to a report from American Chargé d'Affaires Maddin Summers, at La Paz, published July 13, 1911, is 1.022 kilometers (635 miles). Of this mileage, 784 kilometers (487 miles) represents the length of the older railways, while the balance is being operated provisionally by the contractors on new lines now being constructed.

The principal line, the Antofagasta & Bolivia Railway, starts at Antofagasta, Chile, on the Pacific coast, and runs to Ollague, on the frontier, and thence to Oruro, where connection is made with the Bolivia Railway, which continues on to Viacha, the junction point with the Guaqui & La Paz Railway, thus forming a through route from the Pacific to the Bolivian capital, a total distance of 1,157 kilometers (719 miles), the Antofagasta & Bolivia Railway operating the line for its entire length. A change of cars at Oruro and again at Viacha is necessary on account of the difference in gauge of the various lines. Still another change is required to be made on the heights above La Paz, the last few miles of the line being operated by electric in place of steam power.

This whole system is known as the Antofagasta & Bolivia Railway, and it runs through some of the finest Andine scenery in South America. The main line is carried to a height of 13,000 feet above sea level, and one of its branch lines reaches the great altitude of 15,809 feet.

This route also permits of travel from the coast to Lake Titicaca, from Viacha to Guaqui, on the shore of the lake, where commodious steamers can be taken for Puno, Peru, and the journey continued on the railroad running from that point to Mollendo, on the Pacific.

It is expected that the proposed Pan American Railroad will follow the shore line of Lake Titicaca from Guaqui to Viacha, and thence to the Argentine border by way of Uyuni, Tupiza, and La Quiaca, a total distance in Bolivia of 851 kilometers (529 miles), of which 581 kilometers (361 miles) are already in operation.

The new and much shorter route from the Pacific coast to the capital, that from Arica, Chile, to La Paz, is under construction and is well on its way toward completion, the intention being to have the entire line in operation by the end of 1911. The distance between the two cities by this railroad will be only 400 kilometers (250 miles), or only about one-third as long as the older route. Up to April, 1911, the contractors had already put into operation about 70 kilometers of road from Viacha to Corocoro.

A portion of this line, that from kilometer 70 to kilometer 112, is the rack-rail system. At the former point the altitude is 4,921 feet, and the climate is delightful and very healthful. At kilometer 110 there is an altitude of 11,811 feet, and the highest point on the line is 14,108 feet. It is proposed to make the entire journey—that is, upward from Arica to La Paz—in 14 hours, while down it will take only 12 hours. The mean temperature in Arica is 86° F., but on the highest point of the line the thermometer falls in winter to 6° below zero. Plans have been made, therefore, to heat the cars. In addition, compressed oxygen will be carried so as to protect the passengers against mountain sickness.

During the year 1910 the Guaqui-La Paz Railway was sold by the Bolivian Government to the Peruvian Corporation (Ltd.), and it now forms a part of their through system from Mollendo to La Paz. The sale of this road necessitated the building of a line to provide a separate entrance to the capital for the Antofagasta & Bolivia Railway, and this is now under construction, the trains of that railroad continuing to run over the old route as formerly until the completion of the new. This new line will be of meter gauge, and as the first or Chilean section of this company's road is being changed to the same gauge, it is only a question of a short time when trains will be run through from the coast to La Paz without change.

By the sale of the Guaqui-La Paz road the Government was provided with funds to commence the construction of the long hoped for and much to be desired railroad from Potosi to Sucre. The branch line from Mulatos, on the trunk route, to Potosi has been under construction for some time past, and 60 kilometers had been opened for provisional operation by the early part of 1911. By the opening of the line to Potosi this great center of the tin-mining industry will have an easy outlet for the carriage of its minerals to the port of Antofagasta, and it will enable mines of low-grade tin and copper ores to be worked which can not now be operated on account of the high cost of transportation. By the construction of a line through to Sucre an immense stretch of territory will be opened up for development which has hitherto been both expensive to reach and difficult of access. Proposals have been made to the Government for the final survey of this route, which survey is to be submitted to the Government within one year.

Work has commenced on the railroad to run from Uyuni, on the main line of the Antofagasta & Bolivia Railway, to Tupiza, in the southern part of the Republic, near the Argentine frontier. The total mileage between the two points will be 200 kilometers (124 miles). When this line is completed it will need only the construction of a short section between Tupiza and La Quiaca, 106 kilometers (66 miles), to connect the Bolivian railways with those of the Argentine Republic and thus establish direct communication by rail between the capitals of the two Republics, and also with Chile and Peru. Tupiza is the center of another area of enormous mineral wealth, producing tin, bismuth, antimony, and gold.

Still another branch is being constructed from the main line at Oruro in the direction of Cochabamba, the latter situated in a rich agricultural district. The distance between the two cities is 200 kilometers, and that part of the line between Oruro and Banderani, 62 kilometers, has already been put in operation.

Surveys have also been completed for a continuation of the Antofagasta & Bolivia Railway Co.'s new line into the capital as far as Yungas toward the northeast, a total distance from La Paz of 200 kilometers, and a part of the line has already been definitely located. An extension of this route from Yungas to Puerto Pando, on the Beni River, is now being surveyed.

An electric line is also in process of construction for a length of 90 kilometers from Cochabamba toward Chimore, in the eastern part of the Republic, and 13 kilometers of this line have been opened to traffic.

The Government has approved the proposal submitted for the construction of a railroad from Yacuiba, in the southern portion of the country not far from the Argentine border, to Santa Cruz, the capital of the Department of the same name, which will pass through a country rich in minerals and with great agricultural resources. The commerce of this section of the Republic now passes by means of the highways and cart roads to Puerto Suarez, near Corumba, Brazil, on the Paraguay River. It has been proposed to build a railway between Puerto Suarez and Santa Cruz, which would be continued on to Cochabamba, and by this means change the trend of this commerce toward the Pacific.

There is a private railroad line, 33 kilometers in length, which is owned and operated by the Huanchaca Mining Co., and runs from their property at Pulacayo to Uyuni, on the Antofagasta Railway.

Of vast importance to the commerce of Bolivia is the new railroad being constructed in Brazil around the falls of the Madeira and Mamore Rivers, a branch of which, 40 kilometers in length, will extend into Bolivia. This railroad, which is being built to obviate the necessity of shooting the rapids of these two rivers and thus save the terrible loss of life and property, which is estimated to have been 25 per cent in the past, is expected to be completed by August of 1912. Trains are now running regularly over 170 kilometers (105 miles) of line, and the rails, up to July 1, 1911, had been laid for a total distance of 233 kilometers (145 miles). When completed the line will provide a much cheaper and easier method of transportation for the rubber and other products of Bolivia than is possible at present.

A regular line of steamers is maintained on Lake Titicaca, situated at an altitude of 12,900 feet and having an area of 4,000 square miles, being thus not only the highest steam-navigated lake but also one of the largest lakes on the American continents. Lake Aullagas is connected with Lake Titicaca by means of the Rio Desaguadero. The principal Bolivian ports on Lake Titicaca are Guaqui, Puerto Perez, Huata, Ancoraimes, Carabuco, and Escoma.

Bolivia has a network of rivers which afford excellent means of transportation and communication, the entire length of her navigable streams being about 12,000 miles. Of these, the Paraguay River is navigable for some 1,100 miles for steamers of 8 to 10 feet draft, the Itenes for 1,000 miles, and the Beni 1,000 miles (but for steamers of 6 feet draft only), while the Pilcomayo, Mamore, Madre de Dios, Itonama, Sara, Orton, Baures, Inambari, Paragua, Pirai, Chapare, Abuna, Yacuma, and Desaguadero Rivers are navigable for light-draft vessels for distances varying from 200 to 1,000 miles.

THE PRESS OF BOLIVIA.

The Republic of Bolivia began its independent existence in 1825. Up to that time Alto Peru, as the country had been called, was closely associated, in its literary and intellectual development, with Peru from Lima, and with the La Plata Provinces from Buenos Aires. The printing press was introduced into Argentina in 1780, but in Lima, which was one of the first places in the New World to feel the influences of this startling means of diffusing knowledge, the printing press was set up as early as 1582. Whatever local publications came from these presses before the revolutionary movement and during the few years preceding it found their way slowly and by irregular stages into La Paz and elsewhere. Thus The Southern Star, issued in 1807, in Montevideo, with propaganda for liberty, aroused great excitement in Sucre, and other sheets, of one kind or another, were read with avidity. Periodical publications, nevertheless, were practically unknown in Alto Peru while it was a Province.

MOUNT SORATA.

Whose topmost crest has yet to feel the foot of man, although Sir Martin Conway was halted only 250 feet from the coveted goal.

In 1825, however, following as quickly as possible upon the establishment of independence in Bolivia, the press became active. Two papers, the Condor de Bolivia and the Gazeta de Chuquisaca, appeared, the latter in July, the former in November. At first they had no real news, but they carried reading matter. Both were printed in Chuquisaca, one of the earlier names changed later to Sucre, the capital of the country. As it was the seat of a university and of political and social importance, Chuquisaca retained the prestige of publication until 1828, when the first periodical appeared in La Paz. These papers were not regularly issued oftener than once a week, although extraordinary numbers came out from time to time. During the next years other cities like Santa Cruz, Oruro, and Potosi secured papers of their own, as intellectual necessities demanded. At last, on May 1, 1845, a daily newspaper came out in La Paz—La Epoca—the first daily in Bolivia. Since that date the Republic has been regularly supplied with its own daily newspapers.

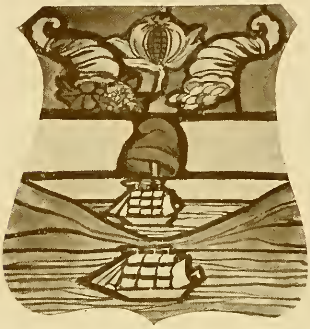
To-day the capital of each Department—political subdivision—of Bolivia has at least a weekly paper, but dailies are regularly issued in La Paz, Cochabamba, Santa Cruz, Sucre, Oruro, and Potosi, while several of the smaller towns support less frequent periodicals. Each local paper is more generally read in its own home than foreign papers, and is, therefore, of importance for the advertiser, but the larger dailies, of which there are many, from La Paz, exert a noticeable influence throughout the country. The average size of the dailies is close to 20 by 15 inches, four pages (two sheets), with usually five but occasionally six columns to a page. Some of these papers fill the first page with advertisements, reserving the second and third pages for reading matter, but allowing whatever seems best to go on the fourth and last page; others reverse the form and have the news items on the first page, placing the advertisements on the inside. The circulation averages about 2,500 copies.

Rates for advertisements are based either upon the column or the column inch; in not a few cases they must be agreed upon by special arrangement. A column may cost $4 (gold), or a full page $16, each insertion. In one case the rate is given as for 100 square centimeters at $1.25 (gold), this space being equal to about 16 square inches, or estimated on the basis of the column inch, about 25 cents for that unit. For continuous advertising covering a definite period favorable terms can always be secured.

COLOMBIA

The Republic of Colombia covers an area of 438,436 square miles, with a population (estimated 1910) of 4,320,000, equal to 10 inhabitants per square mile.

Three chains of mountains which cross the country produce a variety of climate and products, ranging from the temperate to the tropical. Coffee, cacao, sugar cane, tobacco, and bananas are successfully grown and largely exported, and the extensive forests contain a number of valuable cabinet and other useful woods and medicinal plants. Vegetable ivory and rubber are other products of export; also "Panama" hats, in the manufacture of which the natives have acquired considerable skill. The mineral wealth of the country has been but little exploited, although its emerald mines furnish the world's chief supply of these gems. Gold is found in every department, and silver, platinum, mercury, iron, and lead also exist. The emerald and salt mines and the pearl fisheries are Government monopolies. Oil has recently been found in paying quantities.


COAT OF ARMS OF COLOMBIA.

By the constitution adopted August 4, 1886, the Republic of Colombia abolished the Federal Union and the sovereignty of the several States and adopted the unitary republican form of government, with legislative, executive, and judicial branches.

The Senate and the House of Representatives, constituting the National Congress, are intrusted with the legislative power, the former chamber consisting of 35 and the latter of 92 members. Senators are elected indirectly for a term of four years by electors chosen for the purpose, and representatives are elected by direct vote of the people for the same term, at the rate of 1 for every 50,000 inhabitants. Two substitutes are elected for each senator and representative to replace them in case of absence or inability to serve. Congress meets at the capital, Bogotá, every two years on February 1, for a period of 90 days. It may prolong its sessions indefinitely or be called in extra session by the President.

The President is elected by Congress for a term of four years. His salary is $12,000 gold per annum. There is no vice president, but two designados, first and second, also elected by the Congress, succeed the President, respectively, in case of his absence, death, or inability to serve. The President, the designados, and cabinet are as follows:

President, Sr. Carlos E. Restrepo (inaugurated August 7, 1910).
First Designado, Gen. Ramón González Valencia.
Second Designado, Dr. José Vicente Concha.
Minister of the Interior, Sr. Pedro M. Carreño.
Minister of Foreign Affairs, Dr. Enrique Olaya Herrera.
Minister of Finance, Dr. Tomás Eastman.
Minister of War, Sr. Mariano Ospina V.
Minister of Public Instruction, Sr. José María González Valencia.
Minister of Public Works, Sr. Celso Rodríguez.
Minister of the Treasury, Sr. G. Martínez A.

The Department of the Interior (Ministerio de Gobierno) is intrusted with the administration of the various departments and national territories. The post and telegraph offices, hospitals and charitable institutions, sanitation, and the maintenance of public health are likewise under its jurisdiction, as are also the courts and penal institutions, Colombia having no department of justice. This department is also charged with the supervision of the press of the country.

PRESIDENT CARLOS E. RESTREPO.

The Department of Foreign Affairs (Ministerio de Relaciones Exteriores) has charge of the diplomatic and consular corps and the maintenance of foreign relations through them, as well as the settlement of international boundary disputes. It also exercises a certain control over the Roman Catholic churches in the Republic.

The Department of Finance (Ministerio de Hacienda) prepares the annual budget, collects and disburses all public funds, and has charge of the service of the public debt. The customhouses and internal-revenue offices, the control of the valuable salt deposits, and the navigation of rivers are under its jurisdiction.

The War Department (Ministerio de Guerra) has charge of all matters pertaining to the army and navy, and attends to the instruction and training of citizens of the reserve forces. The military and naval colleges are also under its control, as are also the national and rural police.

The Department of Public Instruction (Ministerio de Instrucción Pública) exercises supervision and control over the public schools, high schools, colleges, and institutes for special instruction, among the latter being the National School of Commerce, the National School of Fine Arts, and the National Academy of Music. It also has charge of the National Library, the National Museum, and the Astronomical Observatory, and through the various sanitary commissions and health boards frequently intervenes in matters concerning he public health.

The Department of Public Works (Ministerio de Obras Públicas) is intrusted with the encouragement and regulation of manufacturing industries, mines, agriculture, public lands, colonization, and forests, the registration and granting of patents, trade-marks, and copyrights, the regulation and administration of railways, the maintenance of roads and bridges, of public buildings, and other public works.

The Department of the Treasury (Ministerio de Tesoro) has charge of the mint, the printing of bank notes, and the emission of bonds.

The judiciary comprises a supreme court, a superior tribunal for each Department, and a number of minor courts. The supreme court is composed of seven members appointed by the President for a term of five years, while the justices of the superior courts are appointed for four years.

CATHEDRAL AND PARK. BOGOTA, COLOMBIA.

The permanent army consists of about 7,000 officers and men. Military service is compulsory,[1] and the total war strength of the armed forces is estimated at 120,000. The navy comprises five cruisers, three gunboats, one troop ship, and other auxiliary vessels.

There are about 500 post offices in the Republic, operated by a staff of over 600 employees, who handle approximately 3,000,000 pieces of mail matter per annum. There are over 500 telegraph offices, with 17,000 kilometers (10,563 miles) of Government line in operation. The contract leasing the telegraph and telephone lines to a private individual has been terminated, and the Government has reassumed the control and management of these systems. Contracts have been concluded for establishing wireless stations at Bogota, Medellin, and Cartagena for communication with the West Indies, Panama, and Venezuela.

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[1] The service is compulsory in the sense that the standing army is drafted, one third every year, so that the entire army is renewed every three years.

Under Decree No. 340 of 1910, and subsequent decrees, the Republic has been divided into 15 Departments, 2 Territories or "Intendencies," and 4 "Comisarías" or special districts. Executive authority in each Department is vested in a governor appointed by the President, while the Intendencies and Comisarías are governed by special commissioners. The provincial and district executive authorities are likewise appointed by the President, but municipal councils are elected by direct vote of the people.

COLOMBIA IN 1910.

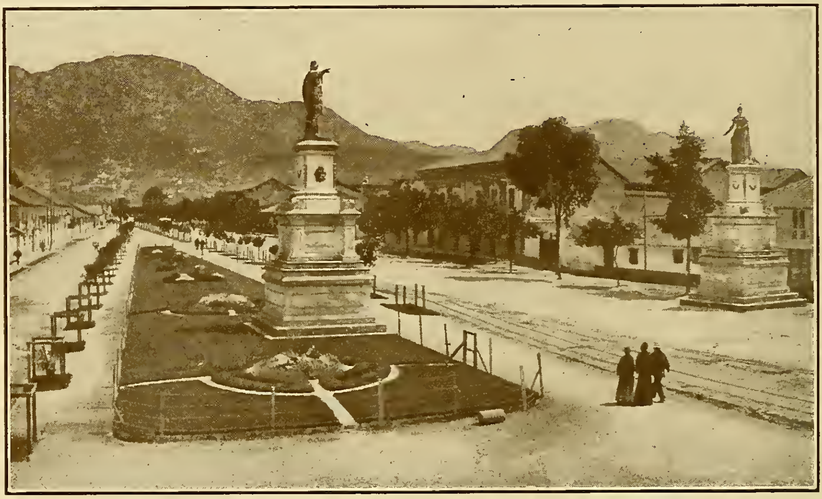
The one-hundredth anniversary of the first uprising for the cause of independence, which took place in Bogota on July 20, 1810, was celebrated by national commemorative festivities in Colombia, and the country was en fete during the latter part of July, 1910. National feeling was strengthened and the people were aroused to refreshened patriotism thereby.

The President of the Republic, Carlos E. Restrepo, was elected July 15 to succeed Gen. Ramon Gonzalez-Valencia, who had been filling the unexpired presidential term, and assumed his duties with great energy and thoroughness. His inauguration took place on August 7, and with his newly appointed cabinet he began work at once. One great task of the administration was to prepare the country for the general elections to be held in the early part of 1911. Very many officials were to be chosen by the people for high offices, and it was a serious undertaking to educate the voters for this constitutional procedure. It should be recorded that these elections were legally held and the officials elected with gratifying success, the Colombians demonstrating a commendable aptitude for the exercise of democratic suffrage. Some disturbances occurred in the country toward the close of the year, but they soon subsided.

The year found the Republic at peace with the rest of the world. Several international questions still remain unsettled, but they are subject to negotiation and arbitration. Unfortunately the commission sent by Panama to Colombia accomplished nothing.

The Government was well represented at the Fourth Conference of American States in Buenos Aires in 1910 and was well pleased at the results accomplished there. Delegates were in attendance also at the centennial celebrations of Argentina, Chile, and Mexico, while other international gatherings were reported by special representatives appointed for the purpose.

Earnest efforts were made during the year to settle foreign obligations, and the Government recognized the necessity of retaining its credit in that regard. For this and other reasons decidedly thorough methods of economy were provided in Government service, so as to adjust the finances of public funds on a sound basis. One of the results was a reorganization of the national budget whereby expenditures were made to balance with estimated income for 1910, so that no deficit is to be accounted for at the end of the year. This step received encouragement from the fact that the total foreign commerce was greater than that for 1909, both imports and exports participating in the increase, the imports noticeably more, an indication that the purchasing desire of the people has advanced.



AVENIDA DE COLON, BOGOTA.

This and the Avenida de la Republica are the most important thoroughfares of the Colombian capital. At the left is the monument of Columbus and at the right that of Isabella the Catholic.

Material progress was made in the improvement of the roads throughout the country, in the construction of public buildings, and in the facility with which the post and telegraph services were carried on. To these matters the Government promises to give particular attention, because they are most needed, and in a country so situated as is Colombia, isolated in a large part of its territory, rapid communication is one of the important factors in bringing modern progressive ideas within the reach of the people.

Among local facts of interest were the purchase, by the municipality of Bogota, of the street railway system, the successful development of the oil fields of the Atlantic coast region near Barranquilla, the inauguration of a modern plant for electric illumination of the city of Cali, and a new tramway service in the city of Cauca. In general, the agricultural possibilities in the production of coffee and rubber, two great staples of the country, have in the past year been studied with care, and the mineral resources have received such practical attention as must soon prove that Colombia is in that respect one of the richest areas in South America.

FINANCE.

The budget for the year 1910 as sanctioned by law of December 11, 1909, estimated the revenues at $10,691,500 gold and the expenditures at $11,770,071, showing an estimated deficit of $1,078,571.

On January 22, 1910, the budget was modified by the President to balance at $10,831,500 receipts and expenditures; $140,000 was added to the estimated receipts to be derived from an additional 2 per cent on custom revenues for the conversion fund, and $938,572 was scaled from the estimated expenditures, principally those of the ministries of war, public instruction, and public works.

The following special budget of public credit is included in the President's amended estimates of expenditures:

	Gold.
Issue of certificates representing claims of foreigners	$500, 000
Issue of certificates representing military rewards	100, 000
Issue of certificates representing requisitions in war 1895	20, 000
Issue of certificates representing requisitions in war 1899	700, 000
Issue of certificates representing treasury bills and certificates	110, 000
Issue of certificates for bounties on exports	525, 000
Issue of certificates for arrears of military pay	100, 000
Issue of certificates, liquor bonds	50, 000
Issue of certificates, Colombian bonds	20, 000
Issue of certificates, Antioquia Railway bonds	100, 000
Total	2, 225, 000

No figures are yet available on actual expenditures and revenues for the year. President Señor Don Carlos E. Restrepo, in his message to the National Congress on July 20, 1911, states that at the time of his assuming the presidency (August, 1910) the revenues had not produced a sum necessary to meet the most urgent expenditures, neither the payment of salaries nor the interior expenses, and that foreign obligations were in arrears. From August until the end of the year there was notable improvement in conditions. For the preceding year, 1909, the receipts amounted to $14,437,100, the principal items of which were:

Custom revenues	$6, 560, 159
Liquor tax	2, 037, 117
Salt tax	1, 403, 648
Slaughter and hide taxes	966, 862
Tobacco taxes	519, 995
Stamps and stamped paper taxes	484, 808
Consular fees	429, 129
Posts and telegraphs	383, 770

DEBT.

The consolidated external debt of 1896 is represented by outstanding bonds to the amount of £2,666,400. The Government guarantees the following railroad bonds:

Sabana Railway, 5 per cent	£300, 000
Santander Railway, 5½ per cent	192, 000
Total	492, 000

In addition the interest on the £1,480,000 bonds of the Girardot Railway (6 per cent).

The internal debt on March 31, 1910, according to the report of the minister of finance, made to the National Assembly May, 1910, is as follows:

	Amount issued.	Redeemed.	Outstanding Mar. 31, 1911.
3 per cent floating debt bonds (gold)	$15,861,158	$15,573,153	$288,005
Colombian bonds	81,833	73,096	8,737
Liquor bonds	315,100	303,900	11,200
Cambao highway bonds	127,500	100,000	27,500
Western railway drafts	877,300	679,000	198,300
Cauca railway drafts	50,000	45,000	5,000
Antioquia railway drafts	427,014	106,500	320,514
Treasury bills	803,097	545,129	257,968
Certificates of war of 1895	33.616	33,043	573
Certificates of war of 1899	2,301,067	974,351	1,326,716
Certificates of foreigners	2,722,800	2,469,310	253,490
Certificates for military rewards	285,417	213,491	71,926
Treasury certificates	149,129	86,160	62,969
Certificates of arrears of soldiers' pay	242,434	108,796	133,638
Certificates of bounties on exports	442,076	118,443	323,633
Total (gold)	24,719,541	21,429,372	3,290,169

FOREIGN COMMERCE.

The value of the Colombian foreign trade for the year 1910, according to Sr. Don Joaquin Caicedo, director general of statistics, amounted to $34,650,789.79. The imports were $17,025,637.05 and the exports $17,625,152.74. For the preceding year the figures, according to the report of Sr. Don Tomas O. Eastman, minister of finance, made to the National Assembly near the close of the year 1910, were: Imports, $12,117,927; exports, $16,040,198; total, $28,158,125.

Sr. Eastman's figures are in correction of figures before published by the statistical office as follows: Imports, $10,561,047; exports, $15,513,346; total, $26,074,393. On the basis of Sr. Eastman's figures for 1909, there was an increase for 1910 of $4,907,710 in imports, and $1,584,954 in exports, or a total increase of $6,492,664.

IMPORTS.

Values of the imports by countries and articles for the year are not available. According to a special report of Charles H. Small, United States deputy consul general at Bogota, the weight of articles from the leading countries for the years 1908 and 1909 amounted to:

Countries.	1908	1909
	Pounds.	*Pounds.*
United States	62,712,276	58,909,078
United Kingdom	48,237,245	43,251,123
Germany	37,767,883	23,318,339
France	7,254,222	4,918,902
Spain	2,420,748	2,874,576
All other countries	23,786,066	17,027,607
Total	182,178,438	150,299,625

On the basis of the weight of the imported goods, a comparison in values of the two years is not possible.

The following table shows how the above-mentioned weights are distributed among the leading articles:

In 1909 there were imported:

	Pounds.
Alimentary substances:	
Cereals	17,474,930
Pastry[1]	6,092,980
Salt	7,136,180
Wines	3,235,630
Soft drinks	2,786,380
Oil and lard	1,262,910
Condiments	1,258,970
Liquors	46,625
Iron, steel, and other metals:	
Steel, iron, and tools	18,027,250
Railroad material	13,910,890
Lead	774,010
Bronze and copper	302,410
Industrial machinery	3,136,650
Electrical machinery	808,510
Textiles and manufactures:	
Cotton goods	13,381,830
Hemp	2,527,550
Wool	1,147,520
Henequen	597,340
Cloth and yarn	233,730
Earths, stones, and minerals:	
Lighting and fuel	23,777,450
Stones, cement, marble	8,274,880
Crystal and glass	1,182,920
Paints, colors, ink	885,840
Earthenware	839,100
Animal products:	
Animals	3,643,080
Soap	1,082,410
Leather and furs	232,470
Miscellaneous:	
Drugs, medicines	5,455,110
Paper	3,057,020
Furniture	2,647,700
Art material	2,036,590
Musical instruments	149,070
Perfumery	116,550

Cereals: From Germany 7,384,996 pounds, from United States 6,986,747. Pastry: From United States 5,363,499 pounds, United Kingdom 254,579, and Germany 123,312. Wines: From Spain 1,586,345 pounds, France 769,817, Germany 260,200, and United States 171,411. Soft drinks: From United Kingdom 1,441,660 pounds, Germany 873,708, United States 249,742. Oil and lard: From United States 663,826 pounds, United Kingdom 219,797, and Germany 126,911. Condiments: From United States 550,535 pounds, Germany 395,707, and Spain 145,508. Steel, iron, and tools: From United States 9,109,593 pounds, United Kingdom 4,770,372, Germany 3,299,971, and France 206,490. Railroad material: From United States 6,117,725 pounds, United Kingdom 5,045,572, and Germany 660,840. Machinery for industrial and agricultural purposes: From United Kingdom 1,559,811 pounds, United States

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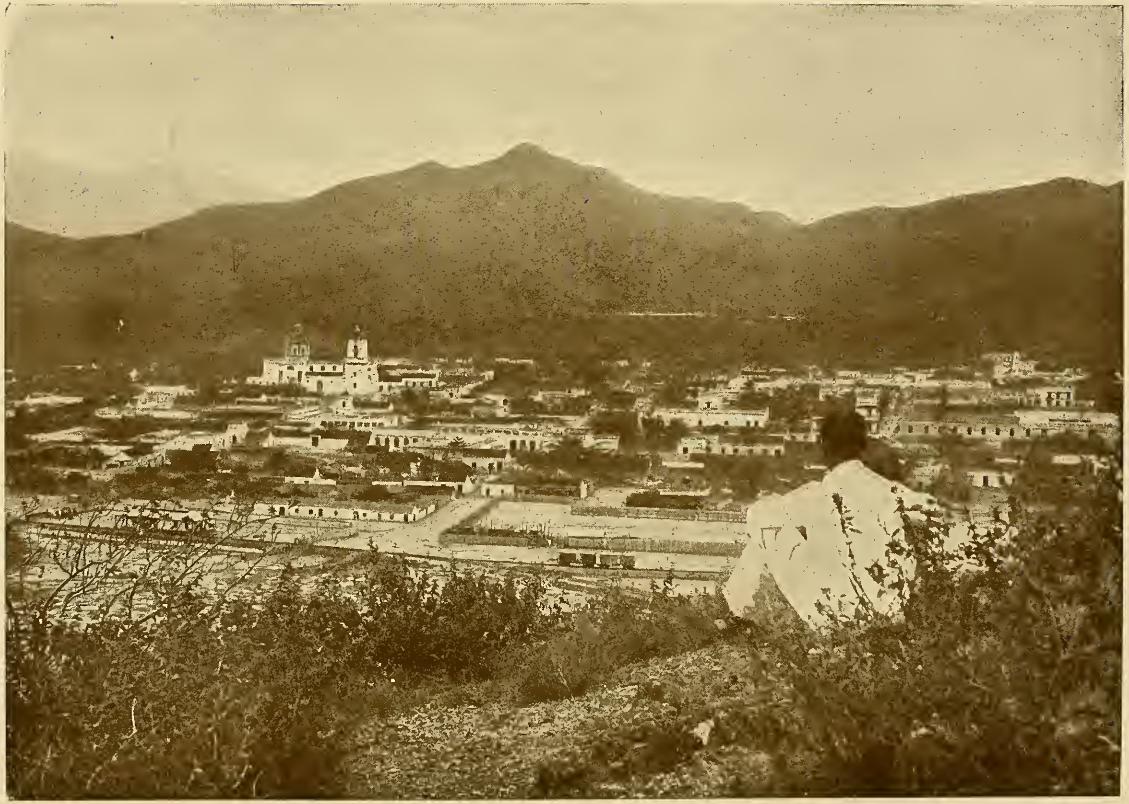
[1] So in the report. Probably pastas alimenticias in the original Spanish, ordinarily meaning food pastes (macaroni, noodles, etc.), but sometimes used to include other food products.



OVERLOOKING THE OLD TOWN OF SANTA MARTA, COLOMBIA.

Santa Marta, founded in 1525, was the first settlement of the Spaniards on the northern coast of what is now Colombia. In 1533 an expedition from this settlement founded the near-by city of Cartagena, and three years later sent forth the expedition which discovered Bogota, then known as Mequeta. Simon Bolívar died in 1830 on the San Pedro estate, about 3 miles from the city. At the present time Santa Marta is a flourishing trade center for the export of bananas and other fruits, being the terminal of a railroad and a shipping port for the steamers of the United Fruit Co.

1,322,970, Germany 218,431, and France 117,520. Cotton goods: From United Kingdom 7,678,521 pounds, United States 3,414,879, Germany 844,111, Spain 234,478, and France 469,262. Hemp: United Kingdom 1,904,769 pounds, Germany 337,957, and United States 230,303. Wool: United Kingdom 442,378 pounds, France 348,696, Germany 223,494, and United States 10,685. Materials for lighting and fuel: From United Kingdom 13,536,942 pounds, United States 9,376,789, and Germany 587,504. Stones, cement, marble, and similars: From United States 3,687,983 pounds, Germany 2,232,564, United Kingdom 1,054,447 and Spain 177,094. Crystal and glass: From Germany 569,199 pounds, United States 224,376, and France 210,797. Animals:[1] Practically all from United States. Soaps: From United States 580,831 pounds, and United Kingdom 414,288. Drugs, medicines, and chemicals: From United States 3,107,205 pounds, United Kingdom 1,008,167, Germany 627,854, and France 359,676. Paper and pasteboard: From Germany 1,559,591 pounds, France 523,688, United States 467,810, and United Kingdom 185,040. Furniture and articles of wood: From United States 1,652,506 pounds, Germany 400,105, and France 96,895.

The imports by ports of entry for 1909 and 1910 were (figures from report of Statistical office):

Ports of entry.	1909	1910
Arauca	$33,292.44	$23,801.72
Barranquilla	5,744,569.82	10,060,169.15
Buenaventura	1,031,941.00	1,278,380.65
Cartagena	2,264,469.52	3,977,477.94
Cucuta	474,426.09	518,271.79
Ipiales	36,674.25	45,030.20
Orocue		9,065.92
Riohacha	59,879.90	45,171.80
Santamarta	151,032.64	97,721.59
Tumaco	764,761.04	970,546.29
Total (gold)	10,561,046.70	17,025,637.05

The total for 1909 was afterwards corrected to read $12,117,927. Corrections of the items not available.

EXPORTS.

The value of the exports for the years 1908 and 1909 to the leading countries, according to the same consular report, were:

Countries.	1908	1909
United States	$8,621,281	$8,587,721
United Kingdom	2,553,297	3,050,863
Germany	1,456,021	1,549,334
France	567,500	482,781
Spain	64,128	90,253
All other countries	943,244	1,536,735
Total	14,205,471	15,297,687

The totals given do not agree with the official Colombian report, as can be seen above.

The value of the leading export articles during the year 1909 were:

Vegetable products:

Coffee	$6,339,119
Bananas	1,117,787
Tobacco	428,129

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[1] The amount given in the table, 3,643,080 pounds, clearly indicates that live animals are not meant. Probably intended to include all animal products not otherwise mentioned.

Vegetable products—Continued.	
Vegetable ivory	$407,795
Rubber	383,544
Cocoa	236,076
Divi-divi	100,527
Timber	99,746
Mineral products:	
Gold in bars	2,150,804
Gold in powder	901,329
Gold mineral	171,342
Silver in bars	176,127
Platinum	154,401
Animals and hides	1,533,082
Hats (Panama)	825,646
Feathers	32,681

Of the articles mentioned there were exported—Coffee: United States $4,170,028, United Kingdom $549,382, Germany $320,005, and France $59,383. Bananas: United Kingdom $597,493, and United States $518,766. Tobacco: $426,403 to Germany. Vegetable ivory: Germany $291,227, United States $173,295, and United Kingdom $20,240. Rubber: United States $232,002, Germany $77,408, and United Kingdom $89,272. Cocoa: United States $96,799, United Kingdom $74,302, and Germany $63,067. Divi-divi: Germany $68,219, and United Kingdom $67,870. Timber: United Kingdom $89,272, and United States $33,580. Mineral products found a market in United States and United Kingdom. Cattle and skins were exported to United States for $875,801, United Kingdom $200,439, and Germany $165,022. Panama hats: United States $585,030, United Kingdom $159,920, Germany $42,374, and France $13,175. Of feathers, practically all were sold to France.

The exports by ports of clearance for the years 1909 and 1910 were figures from report of statistical office:

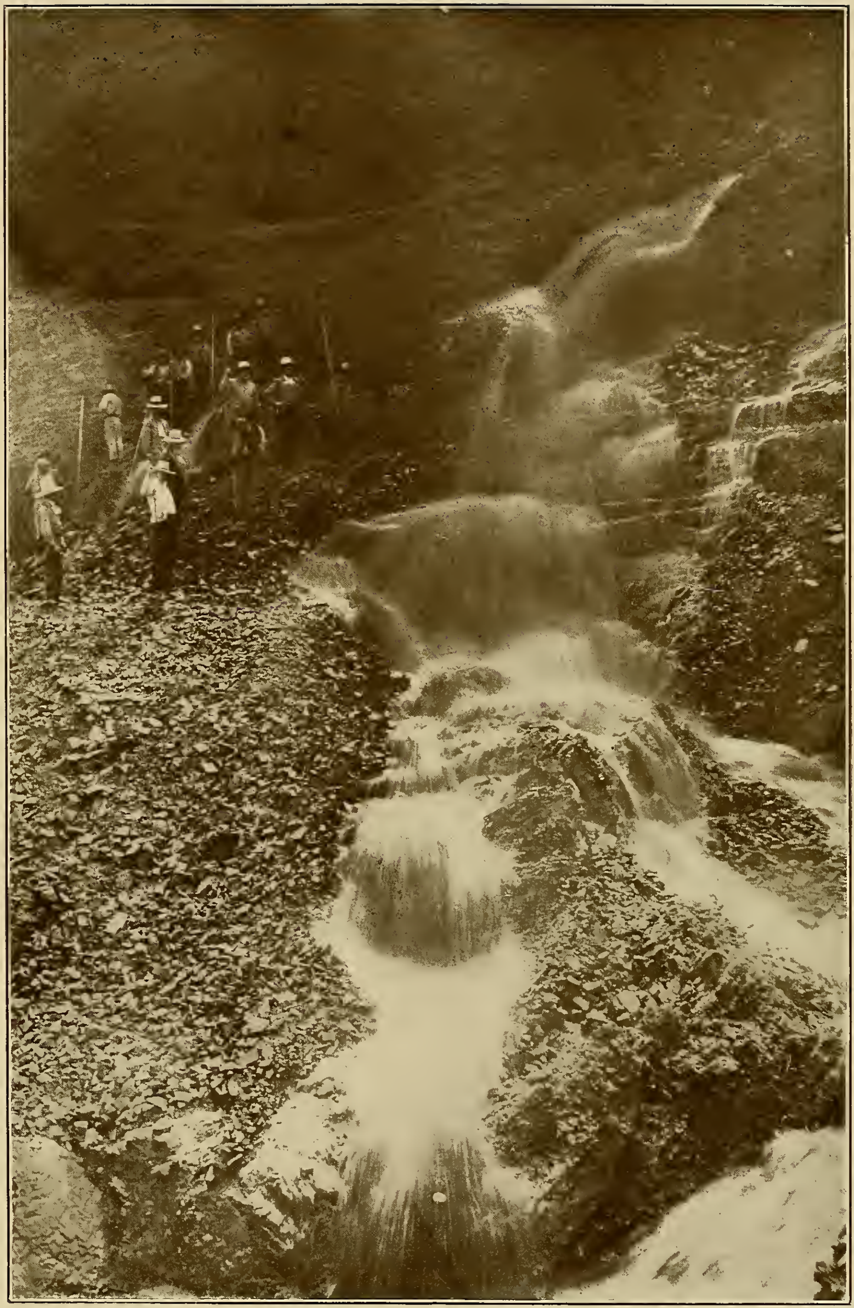
Ports of clearance.	1909	1910
Arauca	$84,434.96	$83,068.22
Barranquilla	5,689,017.37	7,139,083.42
Buenaventura	1,171,405.00	1,153,523.00
Cartagena	4,548,895.75	5,178,441.63
Cucuta	1,211,453.90	861,918.20
Ipiales	57,573.40	84,272.85
Orocue	....	28,708.60
Riohacha	146,422.06	161,507.29
Santamarta	1,310,775.63	1,770,067.96
Tumaco	1,293,368.16	1,164,561.57
Total	15,513,346.23	17,625,152.74

The total for 1909 was afterwards corrected to read $16,040,198. Corrections of the items are not available.

PRODUCTS AND INDUSTRIES.

All or very nearly all the EMERALDS mined to day come from Colombia. And, in spite of the supposed higher value of diamonds, the emerald is the most precious of gems. Carat for carat, a flawless emerald would bring perhaps three times the price of a flawless diamond in the jewelry market.

India, the storehouse of precious stones, is credited with producing the first emeralds, but the oriental emerald is not identical with the modern gem, as it is a variety of the ruby, of a green color and extremely rare. The stone that adorned Aaron's armor, described in the writings of Moses, if it was a real emerald and not a carbuncle, may



WASHING DÉBRIS FOR EMERALDS IN COLOMBIA.

have come from the mines at Coptos in Egypt, which furnished the ancients with the precious green gems. Traces of the original workings of these mines are visible to-day, while in some of the tunnels the tools of the workmen are still to be seen. Certain of these old mines are known as "Cleopatra's mines" because that remarkable Egyptian queen is supposed to have obtained her jewels from that source. Nero wore an emerald monocle at the gladiatorial combats that came perhaps from the mines of Ethiopia not far from those of Coptos. The Museum of Naples contains fine emeralds taken from the ruins of Pompeii and Herculaneum, some of which are carved, and the history of this gem shows that it was highly treasured from earliest recorded times.

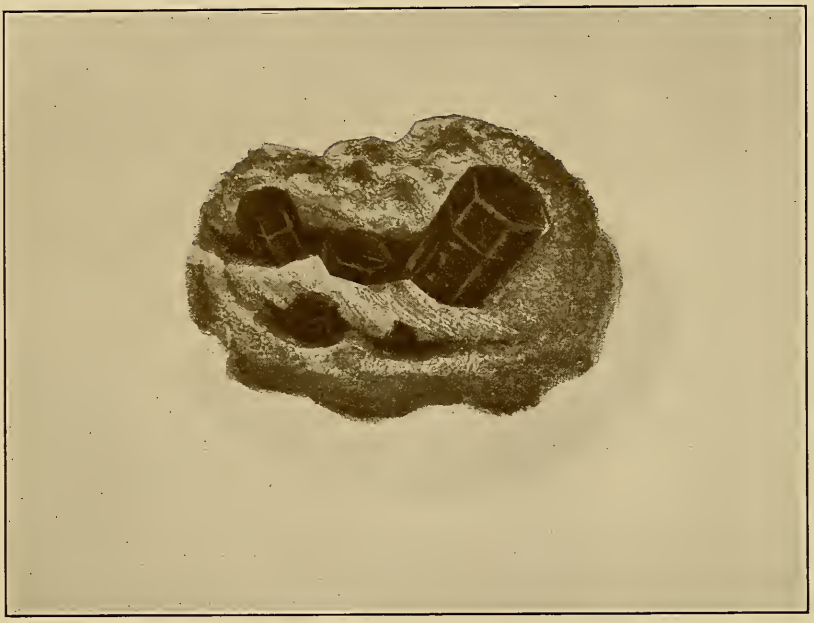
Various virtues were formerly ascribed to the emerald. It was said to be good for the eyes, and even in recent times diamond cutters used to keep one of these green stones to gaze upon as a relief from the eye strain of their work. It was supposed to color water green, to ease the labor of women in childbirth, and to drive away evil spirits. Also, an emerald would expose a false witness in a lawsuit; it gave the wearer the power of eloquence of speech, and it was also attributed with the curious property of striking snakes blind. The veil of superstition that surrounds this gem is such that in the East to-day, when the heavens are propitious, mysterious symbols are carved on emeralds to give them certain magical qualities and medicinal properties.

EXPOSING EMERALD-BEARING STRATA.

"Smaragdus," the Greek word from which emerald is traced, really meant any green stone, and this has led to some confusion in identifying the true character of the jewels referred to under this name in ancient writings. Now the name is only applied to that gem of the beryl family of a bright green color (due to traces of a quantity of oxide of chromium), a translucent hexagonal crystal with glass-like luster and uneven fracture, composed of silica, alumina, glucina, magnesia, and soda. It is brittle and comparatively soft when fresh from the mines, but hardens on exposure to air. To-day emeralds are found in Heubachtel in Salzburg, Odontchelong in Siberia, Canjargum in India, and Colombia, South America.

Pizarro and Cortes sent the first emeralds from the New World to Spain, where they acquired the name "Spanish emeralds" in spite of the fact that the gem has never been found in the Iberian Kingdom. Mexico, Peru, and Ecuador were ravished of their mineral wealth, so wonderful emeralds as part of the spoil found their way into the treasury of the Spanish Kings.

Tradition has it that an Aztec gem appropriated by Cortez was valued at 40,000 ducats. Another wonderful stone, the size of an ostrich egg, was found in the Manka Valley, Peru, where the Indians worshiped it as the Goddess of Emeralds. The Spanish conquerors opened up the mines of Colombia in 1540, enslaving the Indians in order to work them. The richest mineral areas were those of Muzo and Cosquez, about 75 miles north of Bogota, and the Samondoco or Chivor group, about 80 miles northeast of Bogota, at an elevation of about 6,500 feet above sea level. A curious fact in the history of these latter mines is that they were closed and lost to the world in an enveloping forest of jungle for over a hundred years and only rediscovered some 14 years ago.



THE SOUTH AMERICAN EMERALD IN MATRIX.

The Government of Colombia controls the exploitation of emeralds, leasing the mining districts to the working companies. The Muzo group, from which the finest emeralds come, has an estimated yearly output of 262,548 carats of the first class, 467,690 second class, 22,700 third class, and 16,000 fourth class. The Coscuez group, named for an Indian princess, which produced the variety of emerald called canutillo, one of the most valuable stones, is now in the catagory of "lost mines," the exact location being unknown. The Samandoco or Chivor group, not now being worked, is supposed to possess a matrix that would yield a half million dollars' worth of emeralds a year.

The Cuincha group, across the Minero River from the Muzo mines, forms a new field of much promise.

The emerald-mining country of Colombia is extremely inaccessible, and the difficulties of transport force a recourse to the simplest methods in order to extract the stones. The Muzo mine is in what seems to be the bowl of an extinct volcano, and the method in use there is typical. Twenty or thirty laborers with picks and crowbars break out the face of the crater along a determined line, leaving a trail of green quartz that contains the crystals; this quartz is then cut and separated with the greatest care, for the gems are extremely fragile when in the matrix, and the débris dropped into a sluiceway, where it is washed by a stream of water coming with force from the higher planes of the mine; the water is then drained off and the sediment searched for the green gems. It was by just this method that the most valuable single emerald in the world was found. It belongs to the Duke of Devonshire, and is a perfect six-sided crystal that weighs 8 ounces 18 pennyweights, is 2 inches in length, and measures across its three thicknesses 2½, 2⅕, and 1⅞ inches. Another fine stone is the Hope emerald, weighing 6 ounces, which was also found in Colombia.

There can be no doubt that this source of wealth in Colombia will be greatly augmented in the future when improved transportation facilities will make it possible to put the best mining machinery at work to separate these beautiful green jewels from the baser clay.

Nearly half a million pounds of TONKA BEANS were brought into the United States in 1909, yet few people know this seed or its uses.

The tonqua, tonka, or tonquin bean of commerce is supposed to have first reached Europe from that Province of Annam, Tonkin, which is now a French protectorate. It is the dried seed of the fruit of the leguminous tree called by botanists *Dipterix odorata*, which grows in the forests of the northern part of South America.

The tree attains a height of 80 feet, and the fruit is a drupe-like, oblong, fibrous pod that contains one seed, almond shaped but larger and covered with a shiny black skin.

The seeds have the sweet odor of "new mown hay," which comes from their possessing the crystallizable principle, coumarin, which gives the delicious fragrance to newly cut vernal grass and melilot. Tonka trees flourish in the Guianas, in the State of Para, Brazil, and the Orinoco Basin of Venezuela. The best beans come from a region in the vicinity of the Caura and Cuchivero Rivers, where yearly migrations of the natives convert the usually silent forests into populous localities swarmed over by swarthy seekers of the odorous seeds.

In the country watered by the Orinoco and its tributaries several granite mountain ranges cross, with an average altitude, exclusive of isolated peaks, of between 3,000 and 4,000 feet. The land in the vicinity of these ranges is largely composed of detritus, in which powdered granite is present in high percentage, and this seems to be the soil best suited for the tonka-bean tree. As is the habit of many valuable growths, this tree is found scattered singly throughout the forest, rarely in groves, and therefore the work of collecting its fruit is indeed arduous.

Experience has shown that the third-year crop is generally the best, although it is almost impossible to forecast the harvest of any one year.

In Venezuela the tree is known as the sarrapia, from which the men engaged in collecting the beans earn their name sarrapieros.

Early in February they begin to arrive on the Caura from Ciudad Bolivar, or even farther distant, their boats struggling against the powerful current of the stream, where all types of native craft are seen, from the large dugout or bongo, which accommodates an entire family, to the tippy skiff that just keeps afloat with two paddlers. Progress up the river is slow, the boats stopping at the principal settlements in order to replenish supplies. The old hands know every tonka-bean tree in the district and usually confine their labors to the serrapiales with which they are familiar. Some of the more energetic of the bean seekers strike out to the untried regions, but the rapids of the upper river make such trips risky. When a suitable spot has been selected from which to begin operations, the men immediately build the ranchos, or straw houses, that serve for headquarters during the two or three months following. If the fruit has commenced to fall, the men begin collecting the beans at once, otherwise, they wander in the forest, marking spots where the fruit is plentiful, or spend the time in hunting and fishing. Men, women, and children, whole families, are active in the collecting. With the break of day their work commences, the seekers treading the forests so that no fruit-bearing tree may escape their visitation, and so they continue, day following day, until the field is exhausted.

The fruit is much like the mango in appearance and serves as food also for the natives. It has but little pulp which is sticky and of insipid taste, while the seed is covered with a hard, fur-like substance.

When the sarrapiero has gathered sufficient fruit, he carries it to some open spot in the forest where he can get the benefit of strong sunlight; he here carefully breaks open the hard shell and extracts the single oblong, dark-brown bean. The seeds are then spread to dry on large granite slabs common in this region. The dried beans are then shipped to Ciudad Bolivar and sold to local merchants who may subject them to the process called crystallization, or who may send the beans on to Trinidad, where this process can be carried out much more cheaply.

Crystallizing is an alcohol treatment. Open casks are ranged side by side and filled with beans to within 1 foot of the top. Strong rum is then poured over them until the casks are quite full, then they are covered with gunny sacks. At the end of 24 hours the rum not absorbed is run off and the beans are spread out to dry where the air circulates freely. When first emptied from the casks the beans are a dull black color, soft and swollen, but on drying, shiny white crystals appear on their surfaces, and by the time they are ready for packing they seem to be sugar-coated. The beans shrink in drying and present a wrinkled appearance when ready for final exportation.

Tonka beans pulverized are mixed with snuff and tobacco to give a "bouquet," and their sweet scent finds them a ready market with perfumery and soap manufacturers. One bean will perfume a wardrobe. Sometimes they displace the vanilla bean, but strickly speaking it is the fragrant odor that gives value to the fruit.

The tonka-bean tree is also found scattered through the forest lands of Colombia and its systematic exploitation should bring ample returns to those who would brave the hardships of the industry.

The coasts and hot regions of the Republic produce corn, sugar cane, sea-island cotton, rubber, cacao, bananas, fibers, tropical fruits, and vegetables, while the mountains and uplands yield coffee, apples, peaches, berries, potatoes, wheat, barley, and in fact all of the products of the Temperate Zone. The entire country is suitable for stock raising, the pastures in many sections remaining green the year round. Few countries contain the latent wealth and favorable conditions for developing it to such a degree as does Colombia.

On the Magdalena, an adequate labor supply is obtainable for large plantations of bananas as well as of cacao and rubber, and with a sufficient population the Santa Marta district could within a few years increase its production tenfold. The valleys of the Atrato and Leon have long been recognized as having proper characteristics for the cultivation of this fruit. On the Sinu River there is also much good banana land, as well as an area suited to the cultivation of oranges, pineapples, alligator pears, and many other tropical products. This is the great cattle belt, as it is also the source of the cedar and mahogany exported from Colombia.

The coffee crop of the Republic yields annually about 600,000 bags. About 25,000 bags are retained for home consumption, the remainder going to the United States and Europe. The principal coffee districts are the Department of Cundinamarca, which produces the renowned Bogota brand; the Ocana, Cucuta, and Bucaramanga districts, in the Department of Santander, and in the Tolima and smaller valleys of the Cordilleras.

In some departments, notably Antioquia, the mineral industry is well established, while the Marmato and Sucio River gold deposits are said to be equal to those of the

Transvaal. It is said that the entire Pacific coast of Colombia has been formed by gold-bearing alluvial, so that with more effective development a great mining center will be established. The great gold-bearing region is found in the Department of Antioquia and in the mountain ranges that separate the Cauca and Magdalena Rivers. In this large area of many thousands of square miles, wherever there is gravel there is gold, and back in the mountains, where the rock has been laid bare, veins are found everywhere. These veins contain treasures of gold that can be extracted by the systematic use of modern machinery and methods. Many hundreds of miles of this rich territory have never been explored except by the Indian hunter.

Recent gold discoveries near Neiva, on the upper Magdalena River, have opened up a new section of the gold belt. It is known that the Department of Narino, bordering on the Ecuador line, is rich in the precious metal. Gold nuggets are found in the gravel beds of all the rivers of this section flowing into the Pacific Ocean. Discoveries have also been made of rich gold-bearing quartz on the headquarters of the Andagueda and Chirvigo Rivers, distant about 125 miles from Quibdo.

Copper ores are very abundant in Colombia, but owing to the richness of the country in gold and silver little attention has been paid to the commoner metals. When the value of the copper deposits becomes better known and appreciated, Colombia will without doubt rank as one of the greatest copper-producing countries of the world. Copper ores are found in the Ocana and Velez districts, in the Department of Santander, in the districts of Moniguica and Santa Rosa, in the Department of Boyaca, and in the Department of Antioquia.

Russia is the only country whose platinum output exceeds that of Colombia. This metal, which is always found mixed with gold, comes from the gravels of the Choco district, its main source being the Platina and Condoto Rivers, which are tributary to the San Juan River. It is also obtained from some of the streams that flow into the Atrato River.

Coal is found nearly everywhere in the Cordilleras, lignite on the coasts, and coking and steam coal in the interior. Valuable deposits have been discovered recently between the Atrato and Leon Rivers; in short, the Colombian coal fields are well located to take advantage of the market facilities which will become available with the completion of the Panama Canal.

The petroleum deposits are said to resemble those of the Beaumont, Tex., oil fields. The quality of the product is excellent and it was awarded the first prize in the Centennial Exposition held at Bogota in July, 1910. Refineries have been established for the elaboration of gasoline, benzine, paraffin, and other by-products from the crude petroleum.

Iron ores are abundant in the Republic, and shipments of high-grade asphalt are made from Santander.

The principal manufacturing industries are those for the making of textile goods, glass, earthenware, matches, and hats, iron foundries, and flour and sugar mills.

RAILWAYS AND INTERIOR WATERWAYS.

The peculiar geographical features of the Republic have rendered the construction of extended railroad lines a very expensive and difficult undertaking, and some of the existing short lines have been as long as 30 years in the making. The chain of the Andes divides in the southwestern part of the country into three distinct ranges, the middle one of which ceases some 150 miles from the northern coast, thus permitting the Cauca River, which rises between the central and western range, to unite with the Magdalena some distance above its entrance into the Caribbean Sea. To reach Bogota from the west coast, which would be by far the shortest route from the ocean, a railroad would have to traverse not only the western and central ranges, but mount to the plateaus of the third range, on which the capital is situated.

The Magdalena River, which is at present the only available outlet from Bogota to the Atlantic coast, is impassable at several points on account of rapids and has a bar at its mouth which impedes navigation. Barranquilla, at which point the river journey to the capital begins, is about 15 miles by rail from the seaport of Savanilla. The traveler can also make the trip by rail from Cartagena to Calamar (65 miles), taking the steamer at the latter point. A long journey by water is then made to La Dorada, where a change is made to the railroad, and a second river trip commenced at Puerto Beltran, and the final stage of the journey made by rail from Girardot to Bogota, the total time consumed being about seven days.

There is as yet no continuous railroad system within the Republic, but there are many short lines at present engaged chiefly in local traffic, which, when their plans are fully carried out, will connect the coast on both the Atlantic and Pacific sides with the centers of production. Those lines which tap the valleys of the Atrato and Cauca Rivers will probably at some future date form a part of the proposed Pan American railway system.

There are two short lines in the northeastern part of the Republic, but the interests of most of the lines now in operation are bound up with those of the capital, the whole eastern and southern territory from Bogota to the Venezuela and Ecuador boundaries having no rail connection with the more settled sections of the country.

The length of railways in operation in the Republic is 988 kilometers (614 miles). The following table shows the lines in actual operation and the mileage of each:

	Kilos.
Barranquilla Ry	27
Cartagena Ry	105
Santa Marta Ry	94
Cucuta Ry	71
Great Northern Central (Puerto Wilches) Ry	32
Antioquia or Puerto Berrio Ry	142
Amaga Ry	8
Dorada Ry	119
Girardot Ry	132
Sabana Ry	40
Colombian Northern Ry	62
Southern Ry	29
Pacific (Cauca) Ry	94
Cali tramway	8
Espinal or Tolima Ry	25

The lines from Barranquilla and Cartagena, as already stated, run from the north coast and connect with the steamer routes on the Magdalena River. The Santa Marta road also starts on the north coast and runs to the town of Fundacion, on the river of the same name. It is the outlet for a large banana district, and the railroad company has contracted for extensions into new territory which are expected to materially increase the output of that fruit. The bay of Santa Marta offers a safe anchorage all the year round; there is a wharf with accommodations for large steamers and a depth of water of 30 feet.

The Great Northern Central line starts from Puerto Wilches, on the Magdalena, and is under construction toward Bucaramanga, with the ultimate expectation of being built to the capital. Work was temporarily suspended in July, 1910, but the line is in operation for a short distance.

The Dorada Railway was constructed in order to afford a means of easy transportation around the rapids of the Magdalena, which here make navigation impossible. The line extends from La Dorada through Honda to Ambalema, but passengers leave the train to take the steamer route at Puerto Beltran.

The Girardot Railway starts at the Magdalena and joins the Sabana line at Facatativa, the latter line running direct to Bogota and thus completing the line of communication between the Caribbean Sea and the capital of the Republic. These two roads are, of course, of the utmost importance to Colombia, for previous to their completion it was necessary to take a long trip by muleback over the mountains to the river. The Tolima Railway is a short private line running from the Magdalena at Girardot to the town of Espinal.

Two other lines, the Colombian Northern and the Southern Railway, run from Bogota through the extensive savannas, the former to the north and the latter terminating in the town of Sibate, toward the southwest. The Columbian Northern is now in operation to Nemocon and is expected to continue on to Chiquinquira, 106 kilometers farther, where it will meet the Puerto Wilches line to be extended from Bucaramanga. If the plans for this route are carried out, these two roads will form a great trunk line from Bogota to the Magdalena, which will not only shorten the distance and the time consumed in the journey to the coast but will open up a vast extent of territory now but little developed.

The Cucuta Railway is a short line connecting the city of that name with the port of Villamizar, the head of navigation on the Zulia River, with an extension to Tachira on the Venezuelan frontier.

The Pacific Railway, which, starting from Buenaventura on the west coast, runs to the prosperous city of Cali and thence through the Cauca Valley, is expected to be in operation to that city by the latter part of 1911. Cali was also connected with the Cauca River in July, 1910, by a short steam tramway. The Pacific line is expected to follow the Valley of the Cauca for a considerable distance, and will furnish an outlet to the sea for the increasing commerce of that fertile district. With the completion of this line and the railroad connecting the Cauca with the cities of Amaga and Medellin, also that between Medellin and Puerto Berrio on the Magdalena, the transportation rates on coffee will undoubtedly be cheapened and the products of a large part of the Republic will be much more easily and quickly transported to foreign markets than at present, so that the commerce of the country should receive an impetus it has never before known.

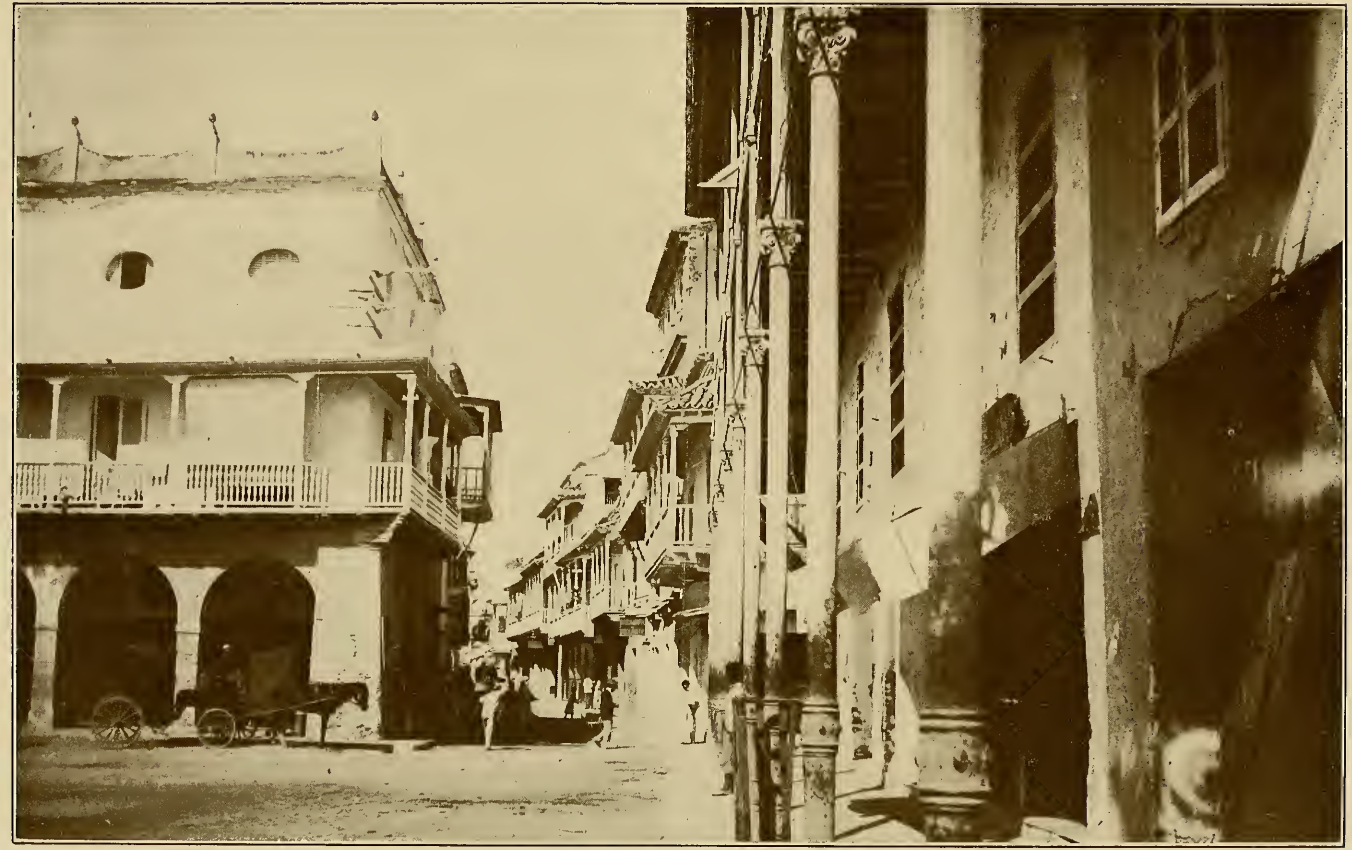
There was but little actual construction work done during the year 1910, but several of the newer lines were opened for provisional operation. The governor of the Department of Antioquia was authorized to negotiate a foreign loan to the extent of $3,500,000 for the completion of the Antioquia Railroad, and work on this line as well as that to the Amaga coal district is being pushed as rapidly as possible.

Colombia has a fine system of waterways, the most important of which is the Magdalena, navigable by vessels of considerable draft for a distance of over 600 miles and by smaller craft 300 miles farther. The Atrato is navigable for 200 miles inland and the Sinu for 110 miles. The Cauca, the Zulia, the Cesar, the Nechi, the Lebrija, the Sogamoso, and some of the smaller tributaries are also navigable for various distances.

THE PRESS OF COLOMBIA.

Colombia, which implies the original region known as New Granada and also the area of the present Republic, has always been proud of the intellectual character of its citizens, and during even the earliest days of the colonies literature was cultivated, and it flourished steadily. Poets produced works of their own before the introduction of the printing press into the country, and they attempted to translate and thus to preserve the primitive imaginative songs and traditions of the natives, while they were ignored in many other parts invaded by the conquistadores.

The first printing press to be set up in (Santa Fe de) Bogota, which was the center and home of all learning in the northwest of the southern continent, began its work in 1738. As was the custom of the times, almost all the uses of the press were devoted to the publication of religious essays or tracts for the benefit of the Indians, but his-



LOZANO STREET, A TYPICAL STREET IN CARTAGENA.

torical pamphlets were not forgotten, and occasionally contemporary matters received notice. Libraries had already been founded in several cities of Colombia before that date, but the royal, or what is now the national, library was ceremoniously opened to the public on January 9, 1777, with a rich collection of most of the books of standard ancient and modern literature. For that time the number of 13,800 volumes, besides many treasured manuscripts, was considered enormous.

To the library and the inspiration derived from it are to be ascribed the birth of the periodical press in Colombia. A native of Cuba, a poor carpenter by trade, but an intellectual giant in his ripe manhood, Manuel del Socorro Rodriguez, feeling that the spread of ideas was slow, if books alone were to be depended on, determined to make use of the printing press, as other countries were doing, to foster contemporary thought. Fired with this ambition, he received the support of the ruling viceroy, and on August 31, 1785, he published the first number of a Gaceta de Santafe, of small size and of really little importance, but it was at least a beginning of periodical publication in Colombia. The Gaceta appeared for only a few numbers. The same editor later published the Papel Periodico de Santafe de Bogota, the first number of which was dated February 9, 1791. This paper, of four small sheets, was a weekly and continued to be issued regularly for 270 numbers. Rodriguez continued his activity till the revolution of 1810.

At the opening of the nineteenth century intellectual awakening had been remarkable, and was followed in Colombia by the establishment of many papers. The revolution that embraced all Latin America at this time brought others into being, but while they lost their purely intellectual character and adopted a tone more political, the newspaper as such had to wait. Probably its origin can be traced to the Semanario, the first number of which appeared January 3, 1808, in Bogota. Its director was the celebrated scholar of Colombia, Caldas, and while the subject matter of the periodical was largely scientific and devoted to the study of the material development of the country, news items were occasionally admitted. When the revolution broke, the only source of news of current events came from papers published in Spain. The Government in Bogota decided therefore to found papers of its own, giving attention to local affairs, and in July, 1810, the Diario Politico appeared. Others were published in different parts of the country, and numerous private sheets followed. Most of them were political and all of them gave news, but they were short lived, and during the disturbed conditions incident to the reorganization of the Republic no one paper survived.

Of the fully 350 periodicals issued to-day in the entire Republic about 75 are registered in Bogota, the capital and chief city of the Republic. Most of these are reviews and bulletins appearing weekly, monthly, or annually; a considerable number are literary, as the traditional tastes of the people are well preserved. The available records in the Columbus Memorial Library indicate that there are nine daily newspapers in the city. The second city in size, Bucaramanga, has about four dailies, and Medellin, the third, but a very active place, the same number. Other cities in the Republic have dailies, and owing to the infrequent communication between various parts of the country each local paper is of great influence in its particular territory.

The daily newspapers of Colombia are almost without exception of 4 pages, of 6 to 7 columns, although in size they may vary from 15 by 24 inches to 20 by 27 inches. In most of them the first page is given entirely, or at least for the greater part, to advertisements, with perhaps one column reserved for the most interesting news. The last page is set like the first, as a rule, although of course differences in make-up are common. The two inner pages have the telegraphic and home news, as well as editorial or descriptive matter, but where space is available, advertisements also are inserted. As far as the reading matter is concerned, illustrations are very infrequent, and practically no use is made of that method of arousing the reader's attention, but in the advertisements the illustrations are general, a picture of the article advertised usually accompanying the text, or if this is omitted, large type is employed to accentuate it. Railway and steamer time-tables can generally be found in each edition of a paper.

Advertising rates in the Bogota papers are based upon the unit of one word, which is that of ordinary type; this is 1 cent gold each insertion. Another manner of estimate is by the column inch or centimeter ($\frac{2}{5}$ inch). By the inch the rate is about 10 to 25 cents gold, depending upon the page, the character of type, and the circulation of the paper. Attractive reduction is of course made for repeated insertions.

The circulation of some of the periodicals appearing less than daily ranges from 500 to 5,000, but that of the well-established dailies averages about 5,000, more or less, according to circumstances. This reaches a large reading public, however, because each local paper has its field almost to itself, and the purchasers would make selection chiefly from the advertisements in the home paper.

SECTION OF THE HISTORICAL WALL OF CARTAGENA, COLOMBIA.

Cartagena was one of the ports from which Peruvian gold was shipped to Europe, and at present is one of the most important of Colombia.

ECUADOR

The Republic of Ecuador has an estimated area of about 116,000 square miles, and a population (estimated 1910) of 1,500,000, equal to 13 per square mile. The Galapagos Islands, about 730 miles off the coast, have an area of 2,400 square miles and a population of a little over 500.

Ecuador, like Peru, may be divided into four distinct regions, with as many varieties of climate, soil, and products. In the lowlands cacao, sugar cane, tobacco, coffee, cotton, bananas, and other tropical fruits are grown, while on the high plateaus wheat and other cereals and potatoes are successfully cultivated. Besides rubber, the extensive forests contain numerous species of useful trees, among the *Phytelephas macrocarpa*, yielding the commercial product known as vegetable ivory, and the *Carludovica palmata*, furnishing the fiber from which Panama hats are made. Other valuable trees are the cinchona, from whose bark quinine is obtained; the mangrove, used for tanning purposes, and the silk cotton tree, yielding the valuable commercial product known as kapok. Gold, silver, iron, copper, coal, sulphur, and other minerals exist in the Republic, and deposits of oil have been located, but the lack of adequate transportation facilities has hindered development of the mining industries.

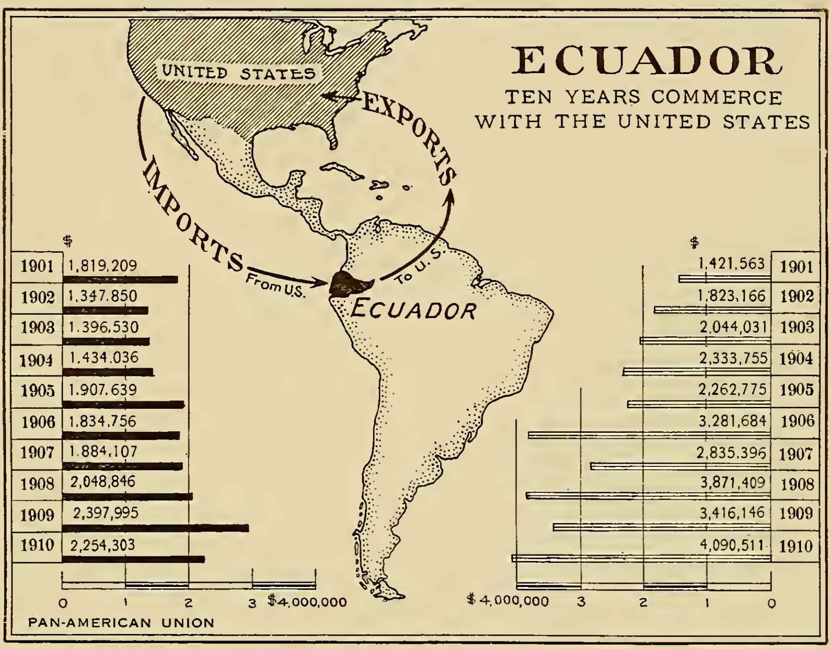
COAT OF ARMS OF ECUADOR.

Under the present constitution, promulgated December 23, 1906, Ecuador is a centralized Republic, with the usual division of powers into legislative, executive, and judicial branches.

The National Congress consists of the Senate and Chamber of Deputies. The former is composed of 32 members, 2 for each Province, and the latter of 48 members, 1 for every 30,000 citizens or fraction over 15,000. Senators as well as deputies are elected by direct vote, every citizen over 21 years of age who can read and write being entitled to vote. Senators are elected for a term of four and deputies for two years. Congress meets at the capital, Quito, on August 10 of each year for a period of 60 days, which may be extended for another 30 days. The President of the Republic may also call an extraordinary session when deemed necessary or expedient.

The President of the Republic is elected for a term of four years, by direct vote, and can not be reelected except after a lapse of two terms. His salary is 24,000 sucres ($12,000). According to the constitution of 1906, in case of the death or disability of the President of the Republic, the President of the Senate or of the Chamber of Deputies, in their respective order, exercises the executive power. In addition to a cabinet, consisting of five ministers appointed by the president, there is a council of state which is consulted by him in all important matters and which represents congress when not in session.

It is made up of members of the cabinet, the president of the supreme court, the president of the court of accounts, two senators, two deputies, and three other citizens, the last seven members being elected by Congress.



ECUADOR.

President Emilio Estrada was inaugurated on August 31, 1911, and up to the time of going to press with this issue, no announcement had been received as to the personnel of the cabinet which he would designate. The cabinet consists, however, of the following portfolios: Minister of the Interior and Public Works; Minister of Foreign Relations and Justice; Minister of the Treasury and Public Credit; Minister of Public Instruction, Post Offices, and Telegraphs; and Minister of War and Navy.

The Department of the Interior and Public Works (Ministerio del Interior y Obras Públicas) exercises supervision and control over the Provinces and municipalities, as well as over the police and fire departments, public health and sanitation, the maintenance of roads and bridges, means of communication and transportation, including railroads and waterways, water works, sewerage and drainage systems, and all public buildings.

To the Department of Foreign Relations and Justice (Ministerio de Relaciones Exteriores y Justícia) is intrusted all matters pertaining to relations with foreign powers, through the diplomatic and consular corps, the settlement of international boundary disputes, the jurisdiction and control of the Roman Catholic Churches and clergy, and with the administration of justice through the courts and penal institutions.

The Department of the Treasury and Public Credit (Ministerio de Hacienda y Crédito Público) handles all the national funds, administers the customhouses, attends to the service of the public debt, prepares the annual budget, and audits and controls all public accounts through the court of accounts. The salt monopoly and the banks and other financial institutions are also supervised by this department.

The Department of Public Instruction, Post Offices, and Telegraphs (Ministerio de Instrucción Pública, Correos y Telégrafos) controls all public and private schools and other educational institutions, such as the Central University, the School of Arts and Crafts, the School of Fine Arts, the Conservatory of Music, the National Library, and the National Astronomical Observatory. The postal, telegraph, and telephone systems are under its supervision, as are also all matters relating to the promotion and regulation of agriculture, commerce and industries, the civil register, the bureau of statistics, and the administration of the Province of Oriente and the Galapagos Islands.

PRESIDENT EMILIO ESTRADA.

The Department of War and Navy (Ministerio de Guerra y Marina) has under its charge all matters pertaining to the national defense, the regular standing army, and the recruiting and training of conscripts, national guard, and marines being under its control. The military and naval training schools, arsenals, the revenue-cutter service, and the coast and lighthouse service are also administered by the same department.

The supreme court, located at Quito, is the highest tribunal, and consists of five justices elected by Congress for a term of six years. The superior courts are located at Quito, Guayaquil, Cuenca, Riobamba, Loja, and Portoviejo, the first two being composed of six judges and the last four of three judges each, all elected by Congress for the same term as the members of the supreme court. The court of accounts is empowered to audit and investigate all public accounts and expenditures, its members being elected by Congress for a term of similar length to that of the justices.

The permanent army in 1910 consisted of 7,810 officers and men and the first and second reserves of about 100,000. A mining and torpedo section, a sanitary section, and a telegraph and telephone corps were created during that year. The navy consists of one cruiser, the *Cotopaxi,* of 600 tons; a torpedo destroyer, the *Bolivar,* of 1,000 tons; one torpedo boat, the *Tarqui,* of 56 tons; three launches, and one auxiliary vessel, with a total equipment of about 200 men.

The total extent of the telegraph system is 2,608 miles, with over 60 offices. Two telephone systems, with 400 subscribers each, are maintained in Guayaquil, and a system is also in operation in Quito, there being a long-distance communication between the two cities. The post-office department is well organized and administered, and the service is being extended by the opening of new offices. The interior correspondence amounts to about 820,000 letters per annum, and the foreign correspondence to 1,809,000 letters and 6,347,000 newspapers and packets.

THE CATHEDRAL AT QUITO, ECUADOR.

ECUADOR IN 1910.

The Republic, during the year 1910, continued to improve in commercial conditions, so that a favorable balance of trade could be reported at the end. Exports increased, the crop of cacao sent abroad being the largest in the history of the country; coffee was also shipped in larger quantities and with greater increased prices; ivory nuts brought higher returns, while hides, rubber, and straw hats were also among the products showing gains in net returns. Imports were somewhat less than in 1909, but not sufficient to disturb the good results of the total commerce.

These material advances in commerce indicate that in agricultural matters the country is prosperous. This is especially true when it is considered that practically all of the crops forming considerable articles of trade are the results of cultivation, only the ivory nuts being of such natural growth that they can be gathered without careful attention to their agricultural condition. As the country becomes more open to travel and investment and its agricultural possibilities realized—for Ecuador is remarkably rich in soil, as well as salubrious in climate—cultivation will produce still heavier results.

The persistent policy of the Government toward developing the means of communication throughout the land, not alone by helping to build new railways, but also by encouraging the construction of better roads between interior points, has in the years past produced financial embarrassments, and there was a deficit in the treasury. Certain obligations were therefore compelled to be postponed to the next year, when a rigid adjustment of expenses is promised. Many heavy and unexpected expenditures have been caused by the pending boundary dispute with Peru, but it is hoped by all friends of both countries that this question will be completely settled before long.

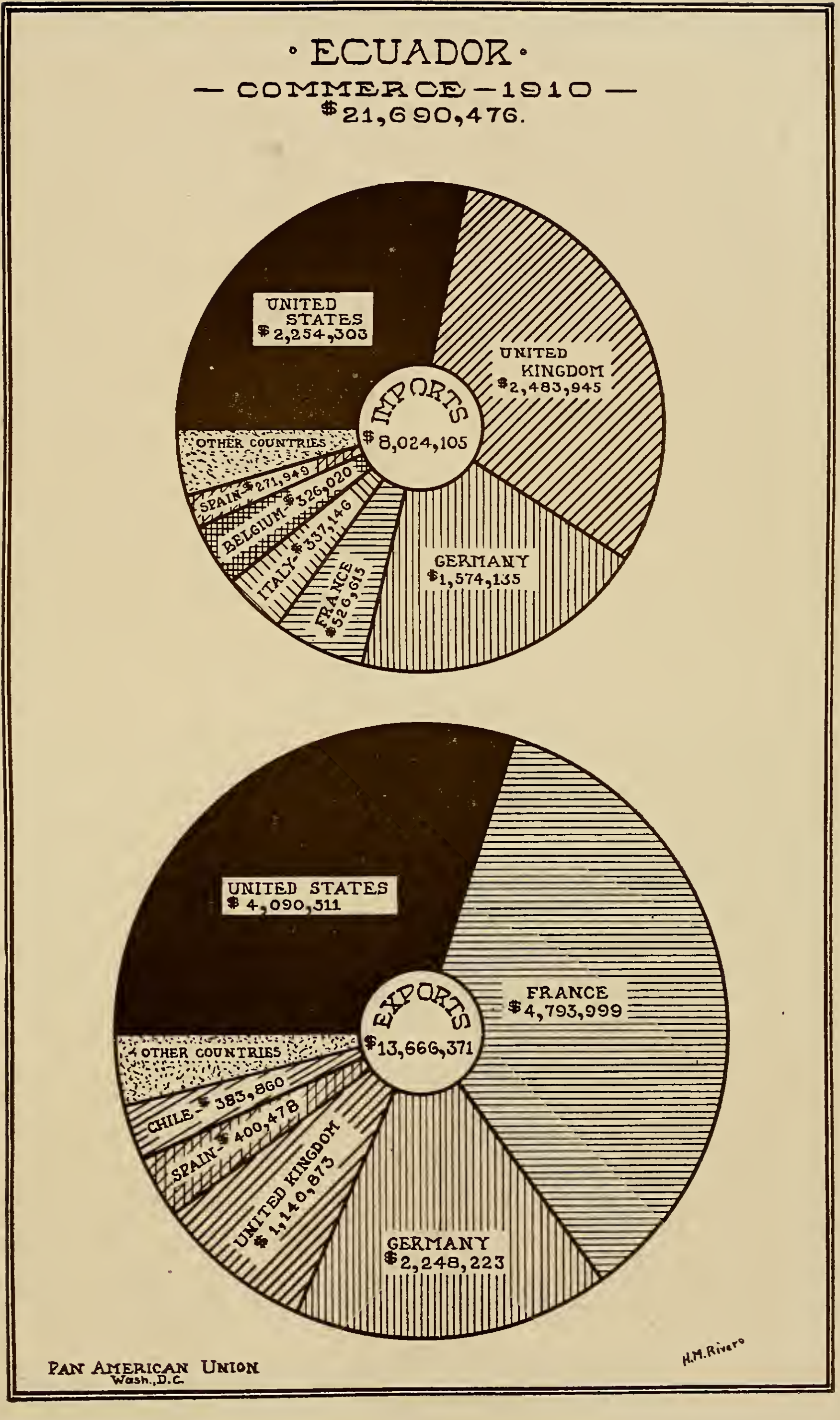
FINANCE.

The total revenues for the year 1909, the latest year for which such data are available, amounted to 15,877,684.67 sucres. The expenditures for the same year were 15,564,882.70 sucres. These figures show a surplus of 322,801.17 sucres. The figures for the preceding year were: Receipts, 13,362,186.71 sucres; expenditures, 12,764,685.77 sucres; surplus, 597,500.94 sucres. There was, therefore, an increase in receipts of 2,515,497.96 sucres, and in expenditures of 2,800,196.93 sucres.

The value of the sucre is approximately 49 cents (24d. sterling). On this basis the receipts for 1909 in United States gold were $7,780,065.49; expenditures, $7,626,792.53; surplus, $153,272.96.

The principal items were:

	Sucres.
Receipts:	
Import duties	8,091,007.21
Export duties	4,230,253.21
Spirit tax	832,360.81
Consular fees	552,035.68
Stamps	433,189.98
Salt monopoly	430,492.19
Licenses	333,673.14
Excise tax	281,447.00
Seignorage on coinage	168,480.00
Tobacco tax	78,780.04
Expenditures:	
Army	2,827,383.20
Public credit	2,584,286.31
Public instruction	1,132,069.70
Police	979,220.99


• ECUADOR •
— COMMERCE — 1910 —
$21,690,476.
UNITED STATES $2,254,303
UNITED KINGDOM $2,483,945
GERMANY $1,574,135
FRANCE $526,615
ITALY-$337,146
BELGIUM-$326,020
SPAIN-$271,949
OTHER COUNTRIES
IMPORTS $8,024,105
UNITED STATES $4,090,511
FRANCE $4,793,999
GERMANY $2,248,223
UNITED KINGDOM $1,140,873
SPAIN-$400,478
CHILE-$383,860
OTHER COUNTRIES
EXPORTS $13,666,371
PAN AMERICAN UNION
Wash., D.C.
H.M.Rivero

Expenditures—Continued.	Sucres.
Public works	827, 865. 42
National exposition	781, 254. 08
Municipalities	499, 253. 35
Charities	426, 325. 99
Telegraphs and telephones	364, 290. 12
Judiciary	343, 590. 56
Customhouse expenditures	315, 026. 83
Diplomatic service	237, 655. 42
Post offices	207, 197. 78
Pawn shops	202, 221. 70
Navy	204, 062. 82

DEBT.

The total debt of Ecuador, foreign and internal, on June 30, 1910, less the sinking fund, amounted to 43,511,024 sucres.

The principal items of the debt and the amounts were:

Guayaquil and Quito Ry.:	Sucres.
First mortgage bonds, 5 per cent	21, 494, 000
Prior lien bonds, 6 per cent	4, 282, 000
Commercial and agricultural bank loan, 7 per cent	2, 991, 261
Bank of Ecuador loan, 7 per cent	2, 746, 308
Salt bonds, 4 per cent	2, 160, 684
Internal consolidated debt, 6 per cent	1, 993, 238
Gallardo loan	2, 100, 000

FOREIGN COMMERCE.

The total foreign trade of Ecuador for the year 1910, according to a report of the United States consul general at Guayaquil, Herman R. Dietrich, dated July 6, 1911, amounted to $21,690,476, of which imports were $8,024,105, and exports $13,666,371. The figures for the preceding year were: Imports, $9,352,122; exports, $12,439,400; total, $21,791,522. This shows an increase in exports of $1,226,971 and a loss in imports of $1,328,017, a total net loss for the year 1910 of $101,046.

All values given in Mr. Dietrich's report are in United States currency, into which manifestly (as shown from the comparative treatment of the 1909 figures) values in sucres have been converted on the basis of 2 sucres=$1.

To be exact, the sucre is worth 24d. sterling (a little under 49 cents United States), but the rate of conversion used by Mr. Dietrich is the one which has been before used in this Bulletin.

IMPORTS.

The following table shows the imports by countries for the last three years:

Countries.	1908	1909	1910
United Kingdom	$3,602,409	$3,149,824	$2,483,945
United States	2,048,846	2,397,995	2,254,303
Germany	2,149,117	1,673,432	1,574,135
France	738,614	610,435	526,615
Italy	468,784	461,147	337,146
Belgium	418,523	437,682	326,020
Spain	337,968	331,497	271,949
Peru	364,890	112,758	59,886
Chile	64,513	101,376	53,946
All other countries	83,701	75,676	136,160
Total	10,277,365	9,352,122	8,024,105

In the above table and in all the following tables the values for the years 1908 and 1909, compiled from Ecuadorian official publications, are converted on the basis of 2 sucres=$1 United States gold, to conform to Mr. Dietrich's figures for 1910.

The following table shows the value of articles and classes for 1909 and 1910:

	1909	1910
Textiles, other than silk	$2,761,289	$1,720,496
Foodstuffs	1,132,200	1,286,553
Hardware	569,394	548,310
Machinery	459,727	350,603
Clothing	320,369	247,879
Wines and liquors	320,274	350,502
Mineral products	300,651	233,798
Drugs and medicines	243,358	232,216
Paper in general	167,255	112,827
Cordage, twine, and thread	158,175	147,856
Hats and caps	144,340	92,219
Leather	135,185	117,303
Crockery and glassware	126,602	114,261
Boots, shoes, and findings	116,831	93,545
Candles	111,562	124,701
Lumber, rough and finished	107,923	64,159
Silk fabrics, pure and mixed	97,369	64,835
Oils in general	66,609	79,175
Perfumery	$64,999	$55,125
Vegetable products	56,823	51,737
Musical instruments	56,012	44,429
Cements, stones and earths	55,955	54,558
Paints and varnishes	53,112	39,642
Books, blank and printed	48,431	38,981
Arms and ammunition	36,050	108,529
Carriages and vehicles	35,397	14,507
Jewelry	21,695	4,571
Matches	16,185	24,708
Boats, launches, etc	11,185	18,872
Animals, live	10,462	8,503
Miscellaneous	673,875	573,736
	8,479,294	7,019,136
Coined money	872,828	1,004,969
Total	9,352,122	8,024,105

The latest official data of imports by articles and countries published are for the year 1909. The principal imports from the leading countries, given in the order of values, were as follows:

Textiles: Laces: From United Kingdom and Germany. Cotton goods: From United Kingdom, Italy, Germany, Belgium, France, and United States. Drills: From United Kingdom, Italy, Spain, United States, and Germany. Cotton blankets: The bulk from United Kingdom. Woolen blankets: The bulk from Germany. Other woolen goods: From United Kingdom, Italy, Germany, Belgium, and France. Silk goods: From France, United Kingdom, China, and United States.

Foodstuffs: Wheat flour: Practically all from United States. Rice: From Germany, Peru, and United Kingdom. Canned goods: From United States, France, and Italy. Butter: From Italy and Germany.

Hardware: Nails: From Belgium, Germany, United Kingdom, and United States. Wire: From United Kingdom and United States. Construction steel: From United Kingdom, United States, and Germany. Machetes: The bulk from the United States. Iron piping: From Belgium, United Kingdom, and United States. Railroad material: The bulk from United States.

Machinery: From Germany, United States, Belgium, and France.

Clothing: Shirts: From Spain, Germany, France, and United Kingdom. Knitted goods: From Germany, Spain, and United Kingdom.

Wines and liquors: Beer: Almost all from Germany. Wine: From Spain, France, Italy, Germany, United Kingdom, and United States.

Mineral products: Coal: From United States, United Kingdom, and Australia. Refined petroleum, practically all from United States.

Drugs and toilet articles: Pharmaceutical products: From France, United States, United Kingdom, and Germany. Soap: From Belgium, United Kingdom, Germany, and United States.

Paper: Cigarette paper: From Spain. Wall paper: From Germany, United Kingdom, and France.

Cordage: Yarn and thread: From United Kingdom, Belgium, France, and Germany. Jute bags: From United Kingdom, France, and Germany.

Hats and caps: Straw hats: From Italy, United Kingdom, Germany, and France. All other hats: From United Kingdom, France, Belgium, and Germany.

Leather came practically all from United States and Germany in about equal parts.

Crockery: Porcelain ware: From Germany, France, and United Kingdom. Glassware: From Germany, United Kingdom, Belgium, and France. Earthenware: From Germany, United Kingdom, and Belgium.

Boots and shoes: From Germany, Spain, United Kingdom, and United States.

Candles: From United Kingdom and Belgium.

The value of imports by ports of entry for the years 1909 and 1910 were:

Ports of entry.	1909	1910	Ports of entry.	1909	1910
Macara	$19,130	$16,148	Esmeraldas	$134,875	$152,850
Puerto Bolivar	45,676	28,104	Tulcan (interior port)	....	1,290
Guayaquil	8,575,382	6,991,626			
Manta	326,577	444,953	Total	9,352,122	8,024,105
Bahia de Caraquez	250,482	389,134			

EXPORTS.

The following table shows the exports from Ecuador to foreign countries for the years 1908, 1909, and 1910:

Countries.	1908	1909	1910
France	$5,052,885	$4,460,807	$4,793,999
United States	3,871,409	3,416,146	4,090,511
Germany	991,782	1,577,999	2,248,223
United Kingdom	1,761,439	1,250,734	1,140,873
Chile	281,871	402,802	383,860
Netherlands	44,813	320,523	87,984
Spain	799,793	292,440	400,478
Italy	115,885	228,836	150,485
Peru	74,382	160,727	72,102
Austria-Hungary	116,800	135,628	109,627
Panama	34,055	52,610	62,940
All other countries	134,489	140,148	125,289
Total	13,279,603	12,439,400	13,666,371

By articles and classes the exports in the last two years were:

	1909	1910		1909	1910
Cocoa beans	$7,261,209	$7,896,057	Straw for hats	$49,783	$29,517
Ivory nuts	1,530,991	1,669,379	Straw for hammocks	33,940	12,568
Panama hats	1,158,573	1,258,575	Miscellaneous	116,027	132,484
Rubber	770,334	1,006,095			
Coffee	528,474	735,692	Total	12,013,765	13,306,371
Gold ore	130,872	134,792	Coined money	425,635	360,000
Gold bullion and dust	143,496	114,387			
Hides	226,389	257,253	Total	12,439,400	13,666,371
Fruits	63,668	59,572			

Of the leading articles there were exported in 1910 to the principal countries:

Cocoa beans: To France, United States, Germany, Spain, and United Kingdom.

Ivory nuts: To Germany, United States, France, Italy, and United Kingdom.

Panama hats: To United Kingdom, United States, and Germany.

Rubber: To United States, Germany, and United Kingdom.

Coffee: To Chile, United States, Germany, and France.

Hides: To United States, United Kingdom, and Germany.

The value of exports by the different ports of clearance for the years 1909 and 1910 were:

Ports of clearance.	1909	1910	Ports of clearance.	1909	1910
Macara	$2,825	$5,615	Manta	$828,992	$1,036,282
Puerto Bolivar	47,103	37,267	Bahia de Caraquez	941,707	868,916
Guayaquil	9,753,832	10,710,820	Esmeraldas	477,214	394,727
Ballenita	27,500	27,774	Tulcan (interior port)	3,086	3,824
Manglaralto	45,046	54,793			
Machalilla	154,276	142,424	Total	12,439,400	13,666,371
Callo	182,517	383,929			

PRODUCTS AND INDUSTRIES.

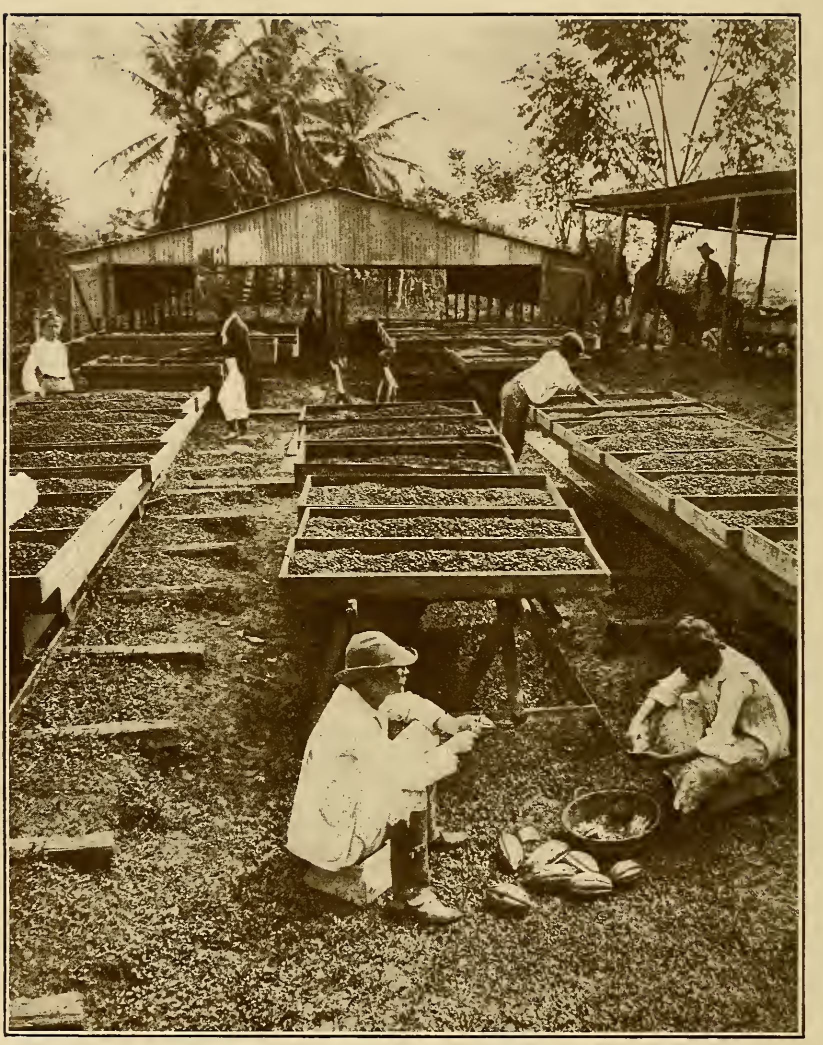
CACAO. Ecuador has a treasury of wealth in her vast cacao groves. Cacao is cocoa. It is also chocolate. Botanists and philologists have been telling the public that the correct way to write cocoa is cacao, but the ruling of the advertising man commands a wider reading than the decisions of scientists, so as long as the public is admonished to "Drink fulanos cocoa" in 2-foot type on every billboard, the fashion in the name will favor the latter spelling. Outside of English-speaking countries the scientific spelling holds.

Chocolate is different in derivation. It is a corruption of a similar sounding Aztec word which, translated literally, meant "water from the choco." Cortes transcribed this word as cacao, and this completes its etymology. The difference in spelling has led to a useful trade distinction. Cacao now signifies the raw and cocoa the finished product. Chocolate is a variation which will be explained later. The cacao bean must not be confused with the coca, the plant of Peru which yields a leaf chewed by the Indians for its stimulating properties due to the cocaine content; nor with the cola nut of West Africa, which resembles it in a slight degree chemically; nor yet with the coconut, to which it has no relation.

CACAO PODS AND TYPICAL KNIFE USED IN OPENING THE SHELLS.

The cacao tree is indigenous to Mexico, Central America, and part of South America; but has become naturalized in Ceylon, the Philippines, Kamerun and the Gold Coast. Thus it is seen to be an essentially tropical cultivation growing in areas of 20° on either side of the Equator. Altitude has a direct influence on suitability of location for cacao cultivation, the plantations lying in a plane from 650 to 2,600 feet high.

The tree was originally a wild evergreen, growing from 16 to 40 feet high and bearing a fruit in which the seeds lie buried in a cucumber-shaped pod 5 to 10 inches long and 3 to 4 inches thick. The seed, which is the raw cacao of commerce, resembles a thick almond in size and shape. When ripe the pods are cut from the tree by means of a queer forked knife with a curved blade on one side, set on the end of a long pole. This odd implement serves to remove the fruit from the tree without



CURING AND DRYING CACAO BEANS

The beans are "shelled," like peas, from the pod.

injury. The pods are gathered in heaps and left on the ground for a day or two before they are judged fit to be cured.

The process of curing is an extremely delicate one and to a great extent determines the flavor and quality of the finished product. Fermentation and drying are the two main steps and naturally follow shelling and breaking. This is done with a cutlass or large knife. A cut is made around the pod, taking care not to let the blade pass through the shell far enough to injure the beans. The pod is then broken in the middle by a sharp jerk and the beans are taken out and separated from the fibrous tissue contained within. The cacao seed is now ready to be taken to the sweating house, where the process of fermentation gives them superior color, flavor, and aroma. There is considerable controversy among the experts as to just what happens to the bean during fermentation, but there can be no dispute as to the improved results. Washing is practiced in some countries, but it is doubtful if it helps the bean. Drying follows, and this is done either in the sun or with the aid of hot-air furnaces. The bean is now the finished product, has a bright red color outside, chocolate color inside, and crumbles easily in the fingers.

Analyses of the cured bean show that it is rich in fats, albuminoids, caffeine, and theobromine, which latter "drink of the Gods" gives to cacao and chocolate their real character. Chocolate differs from cocoa in that the "cocoa butter," a fat that is contained in the nibs of the beans, is part of the first compound, but is avoided in the latter. Cocoa butter forms the basis of toilet pastes and pomades.

Cocoa is really a factory product and the cured bean is treated differently in different countries, in order to produce a drink that suits the taste of the public catered to. Dutch cocoa is sold largely in England, English meets with favor in the United States, while American and French chocolates sell all over the world. The ever-increasing consumption of chocolate-covered candies and its use as a flavoring extract guarantees a progressive market for the cacao bean, a market that will be made more accessible to the owners of the large cacao estates that cover Ecuador with the opening of the Panama Canal.

VEGETABLE IVORY. Another unique industry of Ecuador is the export of vegetable ivory. The Spanish name is "coroza," but another similar nut is sometimes confused under the same designation.

The fruit of the tagua palm (*Phytelephas macrocarpa*) furnishes this article of commerce, which has proved to be an excellent substitute for the elephant-tusk product, and has been found useful in other ways.

The tree grows wild along the west coast of South America, from Panama through Colombia, Ecuador, and Peru. It is a stunted palm fern, growing from 10 to 20 feet high, with a very short trunk which is crowned with fronds of large, bright-green, feathery leaves. In blossom the flowers give off a strong perfume; and the fruit is somewhat similar to the coconut, growing from four to nine drupes to the tree. The drupes weigh nearly 20 pounds, grow to about the size of a man's head, and consist of a woody, fibrous, wart-covered wall that incloses the seeds proper, which are of hard white composition, small-potato sized, fine grained, and approaching real ivory in all characteristics. The heads hold from six to nine seeds. The seed, when very young, contains a clear insipid fluid that serves the thirsty jungle traveler as water, but, like the coconut, this liquid quickly becomes milky and sweet flavored, and then the small native animals find it most appetizing. As climate affects the development of the tree, so a considerable variation will be found in the form and composition of the tagua nuts that grow under conditions of excessive rainfall and those gathered in the dryer climates. As the plant grows wild and uncultivated, the time of bearing is not accurately known, but it is judged to be about the sixth year, and the life of the tree is estimated at from 50 to 100 years.

Natives gather the fruit of the tree, taking those nuts found on the ground which are matured. Immature seeds have a soft spot in the center which makes them less

LOADING CACAO ON A SHIP IN THE GUAYAS RIVER, GUAYAQUIL, ECUADOR.

Ecuador produces a superior quality of cacao, which is very much in demand, and the yearly crop amounts to about 20 per cent of the world's production. Shipments of cacao constitute more than 55 per cent of the total exports of the Republic, while the total foreign commerce amounts only to three times the value of cacao exports.

valuable, so care must be exercised in selection to avoid faulty fruit. The vegetable ivory is sold to a local merchant or exporter. The market price is governed by the competition of these exporters, which is resultant upon the American and European market. Some German firms keep quantities of the nuts stored to be sold only when the market is most favorable. Roughly, the nuts bring from $2 to $2.50 per 100 pounds in Guayaquil; specially selected ones average higher. The Government of Ecuador collects a duty of $1 per 100 pounds on unshelled and $1.40 on shelled seeds. Incidental expenses bring the cost of vegetable ivory up to nearly $9 per 100 pounds in Hamburg, which is the center of the vegetable ivory trade. Of course, cheaper grades average lower prices.

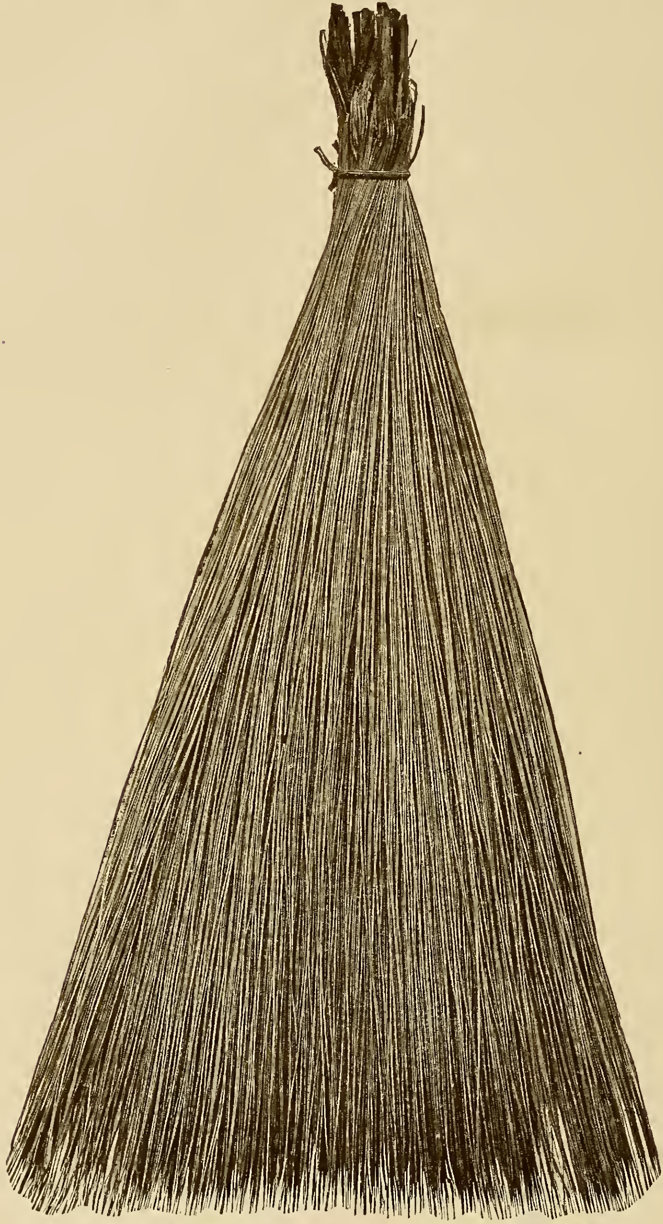
The principal use of this curious product is in the manufacture of buttons. Some vegetable ivory is consumed in making umbrella handles, chessmen, poker chips, and similar articles that are also made from the dentine ivory, but the largest proportion by far of the vegetable product is bought up to be turned into the aforesaid very important furnishing of wearing apparel. Turning out ivory buttons is a large industry that gives employment to many in both Europe and the United States. The process of changing the dried tagua seed into fancy waistcoat buttons is varied, complicated, and is carried on in extensive plants fitted with many different kinds of special machinery.

PALM FURNISHING THE TOQUILLA STRAW OUT OF WHICH THE PANAMA HATS ARE MADE.

The manufacture of Panama hats in Ecuador has for many years been one of its few chief industries. To-day this product takes third place in the export trade of the Republic.

The average annual export of vegetable ivory from Ecuador is 20,000 tons. Colombia has a fair share of the trade, with yearly increasing exports from Cartagena and Savanilla. Although in recent years a limited amount of this product has been sent out of Africa, yet the real home of the tagua palm is Central and South America where it is a unique source of wealth to the countries producing it.

THE PANAMA HAT is made in Panama. The above statement would not have been true several years ago, for, although this special style of straw hat was universally designated "Panama," it was manufactured in the Province of Manabi, Ecuador, where it passed under the native name of "jipijapa." But a President of the Panama Republic, realizing the inconsistency of not producing an article that paraded so



PALM FIBER, STRIPPED AND ROLLED READY FOR WEAVING A PANAMA HAT.

The outer plaits are removed and the inner ones split into shreds of the fineness desired. After being immersed in boiling water the "straw" is first dried in the shade and then exposed to the sun.

extensively under his country's name, set about encouraging the cultivation of *Carludovica palmato*, the shrub which furnishes the toquilla straw for the hats, imported weaving teachers from Ecuador, established a school, and so encouraged the "infant industry" that to-day Panama has every right to stand godfather to the jipijapa hat. The experiment was so successful that the minister of promotion in Honduras put into practice a similar scheme, and now some very fine Panama hats come from Honduras. Originally, all the hats of this special weave were shipped via the Isthmus, and thus the point of distribution was responsible for the name.

It is a mistake to suppose that the high price of Panama hats is the result of the cost of the special straw from which they are made. In fact, high import duties and commissions account for the prohibitive prices of the ordinarily good article when purchased in the United States; but it is true that rich planters along the Ecuadorian coast and in Panama are willing to pay $80 or $100 for the finest hats made, and these are seldom seen in northern countries. A hat of the very best quality is so pliant and flexible that it can be folded and carried in the pocket without the slightest injury. One sent to the former Prince of Wales could be folded into a package no larger than a watch.

LOGGING IN ECUADOR.

The raw material, or toquilla straw, out of which the Panama hats are made, and which supplies those qualities which make for compactness, lightness, durability, elasticity, and the waterproof properties of the finished article, grows chiefly in Ecuador, although it is also found in Colombia and in the forests of the upper Amazon. The shrub is from 6 to 10 feet high and thrives best in hot and humid regions.

It is fan shaped, resembling the saw palmetto, the quality of the straw varying much in different localities, and in this variation is based the difference in cost of the woven Panama hat.

The price of the raw material depends upon the place of production, color, length, thickness, and number of threads to the strand or skein of the freshly gathered straw.

The fan-shaped leaves must be cut from the trunk of the shrub before they open, or just as they ripen, then stripped of their outer filaments, dipped for a few seconds in a vat of boiling water, then withdrawn for a moment, to be again immersed for an instant, taken out and shaken vigorously, hung up to dry in the shade, and a day or two later put out in the sun to be bleached by its intense rays. If a little lemon juice is added to the hot-water bath, the result is a much whiter straw. In a day or two the sprouts shrivel into a light compact cylindrical form, like cord or string, when the straw is ready for weaving. It was formerly stated that Panama hats were woven under water, which is not strictly true, although the straw must be kept thoroughly moistened while in the hands of the weaver. A skilled manipulator of toquilla will complete one hat in five or six months, working always in the late twilight or early dawn, the only time available for making the best grades of Panamas.

Native women and children become the most skillful hat weavers, although men are sometimes found with sufficient deftness of fingers to be successful in the art.

The Provinces of Manabi and Guayas, Ecuador, export the finest Panamas; the famous Montecristo and Santo Elena brands coming from there. Large quantities of toquilla straw are exported to Piura, Peru, there to be made up into a special style head covering called catacaos. There is some Panama hat weaving carried on in Antioquia, Colombia; the recently established schools in the Republic of Panama have been entirely successful, and as a household industry hat making is the occupation of many in Honduras. Santa Barbara is the seat of the hat trade in Honduras, and the finished article is disposed of for from $2 to $25. Toquillo is renamed junco, but the plant is treated in the same manner as in Ecuador, although sometimes it is smoked in sulphur fumes to produce a better colored straw. Most of the hats are bought up by native traveling buyers who go from village to village, picking up the output, which is eventually exported to Europe and the United States, although there is always a steady demand for Panamas in all Latin America. These hats have proved to be the ideal head covering for warm weather or for use in tropical countries. They are comfortable, light, offer protection from the sun's rays, are impervious to water, and last indefinitely. A good Panama may be cleaned and cleaned again year after year without deterioration.

Perhaps with the closer relations that are being brought about between the United States and the Latin American Republics, these special hats will become even more commonly seen than they are now; for there can be no better protection from the sun of the almost tropical summers in the United States than a Panama hat.

Coffee is grown in Ecuador for domestic consumption and for export, the annual crop being estimated at 7,000,000 pounds. Chile is the principal market for this product.

Rubber is gathered and brought to market during all the months of the year, something more than 1,000,000 pounds representing the annual yield.

The growing of sugar cane is of considerable importance, the output of the various plantations aggregating in the neighborhood of 160,000 bags (of 100 pounds), which is about sufficient for the home market, although there is some traffic in this article with outside countries.

Cattle breeding is an important industry, grazing lands being abundant both on the coast and in the interior. Hides command remunerative prices and form a considerable item in the export trade. Goatskins and alligator hides are also exported. Sheep are raised in the uplands, both for mutton and wool, the latter being of very good quality.

In order to encourage the development of the grape industry, the National Congress has exempted domestic grape products from the payment of Federal and municipal taxes, and for the general promotion of agricultural development the Government has recommended the establishment of boards of agriculture in Quito, Guayaquil, and Cuenca. These boards will work in conjunction with the Government for the development and improvement of stock raising, irrigation, planting and fertilizing of lands, the harvesting of crops, and the improvement of the means of communication. The importation of useful seeds, plants, and animals will be encouraged and premiums offered for the best results obtained in the agricultural and stock-raising industries of the Republic. Included in this plan are the founding of agricultural schools and the establishment of meteorological observatories.

Other than the plaiting of hats, to protect which an export duty is placed on shipments of toquilla straw, manufacturing industries are represented by foundries, ice plants, sugar refineries, and a number of flour mills. Several small establishments are also engaged in the manufacture of woolen and cotton blankets, ponchos, bayetas, common carpets, felt hats, etc. Laces, embroideries, shoes, furniture, matting, saddles, wagons, and carts are made by hand, and a small shoe factory has been installed.

A FLOURISHING PINEAPPLE FIELD IN ECUADOR.

The principal industries of Guayaquil of long standing cover such important articles of consumption as vermicelli, chocolate, biscuits, beer, ice, soap, candles, and liquor, while the more recent industries consist of the manufacture of bags, wafers, cotton fabric, mosaics, and a well-equipped tannery. The manufacture of matches has also been particularly successful in the Republic.

In Quito manufacturing interests are represented by flour mills, foundries, ice factories, and sugar refineries. Shoes are made by hand. Other industries, such as the making of blankets, ponchos, carpets, saddles, hats, furniture, and pottery are represented in a small way. The capital is also noted for the large amount of religious painting and sculpture done within its limits and exported to other countries. The making and coloring of small articles from vegetable ivory and the curing of the skins of small birds, particularly humming birds, are carried on to some extent in the city.

The mineral deposits in the country have as yet been only slightly developed. The country is known to be rich in gold, mercury, copper, iron, lead, and coal, while silver-ore deposits have been found but not worked, and at Esmeraldas platinum has been found in variable amounts. Petroleum has been discovered in paying quantities. Large deposits of sulphur are also known to exist in the Pichincha and Chimborazo districts and in the Galapagos Islands. Lack of transportation facilities only retards the development of the coal deposits in the interior of the Republic.

RAILWAYS AND INTERIOR WATERWAYS.

The total extent of railway lines in operation in Ecuador is 563 kilometers (350 miles). The Guayaquil and Quito line, constituting a greater part of this mileage, completed the construction of its road from Guayaquil to the capital on June 25, 1908, and since that date trains, both passenger and freight, have been running regularly between the two cities. The regular passenger trains run only during the day and make the trip (297 miles) in two days, when formerly, by mules and on foot, it was not uncommon to require 12 to 15 days in going over the same route. Negotiations for a continuation of this line in a northeastwardly direction to Ibarra and Tulcan have been commenced.

DOUBLE ZIGZAG TRACK FROM THE DEVIL'S NOSE NEAR ALAUSI ON THE GUAYAQUIL AND QUITO RAILWAY.

The Machala Railway, owned by the municipality of the city of that name, runs from Puerto Bolivar to Machala, Pasaje, and Guabo, a total distance of 30 kilometers (19 miles). On a visit of the President of the Republic in 1910 the line was thoroughly inspected and the Congress later put the road in good repair at a cost of $50,000. Congress also approved during the year a contract for the construction of a line from Puerto Bolivar to Biblian. This line will traverse a zone rich in minerals, especially coal, and also well suited to the raising of all kinds of agricultural products.

The new railway from the Bay of Caraquez to Quito, which is being constructed by a French company, is making rapid progress. In the early part of 1911 trains were in operation as far as Calceta, a distance of 55 kilometers (34 miles). The total length of this line from the coast to Quito is 300 kilometers (186 miles), being much less than that traversed by the older railroad from Guayaquil. The route passes through an exceedingly fertile region, one that is now producing a considerable yield of the best grades of cacao, and is capable of being developed so that immense quantities of this and other valuable agricultural products can be grown with a minimum outlay of capital and labor. The climate of the territory that will be traversed and opened up by this railway is salubrious and healthful, the temperature ranging from 23° to 29° C. The rainfall is less than that experienced at Guayaquil or Panama, and the winter season is shorter. A branch of this line from Calceta to Ricauarte by way of Canuto and Chone has been authorized, as has also another branch from the main line which is to run along the Daule River and terminate at Guayaquil.

With the completion of the main and branch lines of the railroad from the Bay of Caraquez, of the railway from Puerto Bolivar to Biblian, and that from Manta, on the coast, to Santa Ana, work on which latter road has already started, a large part of the western section of the Republic will be opened up for greater development, and communication between the Pacific Ocean and the capital will be much more easily facilitated.

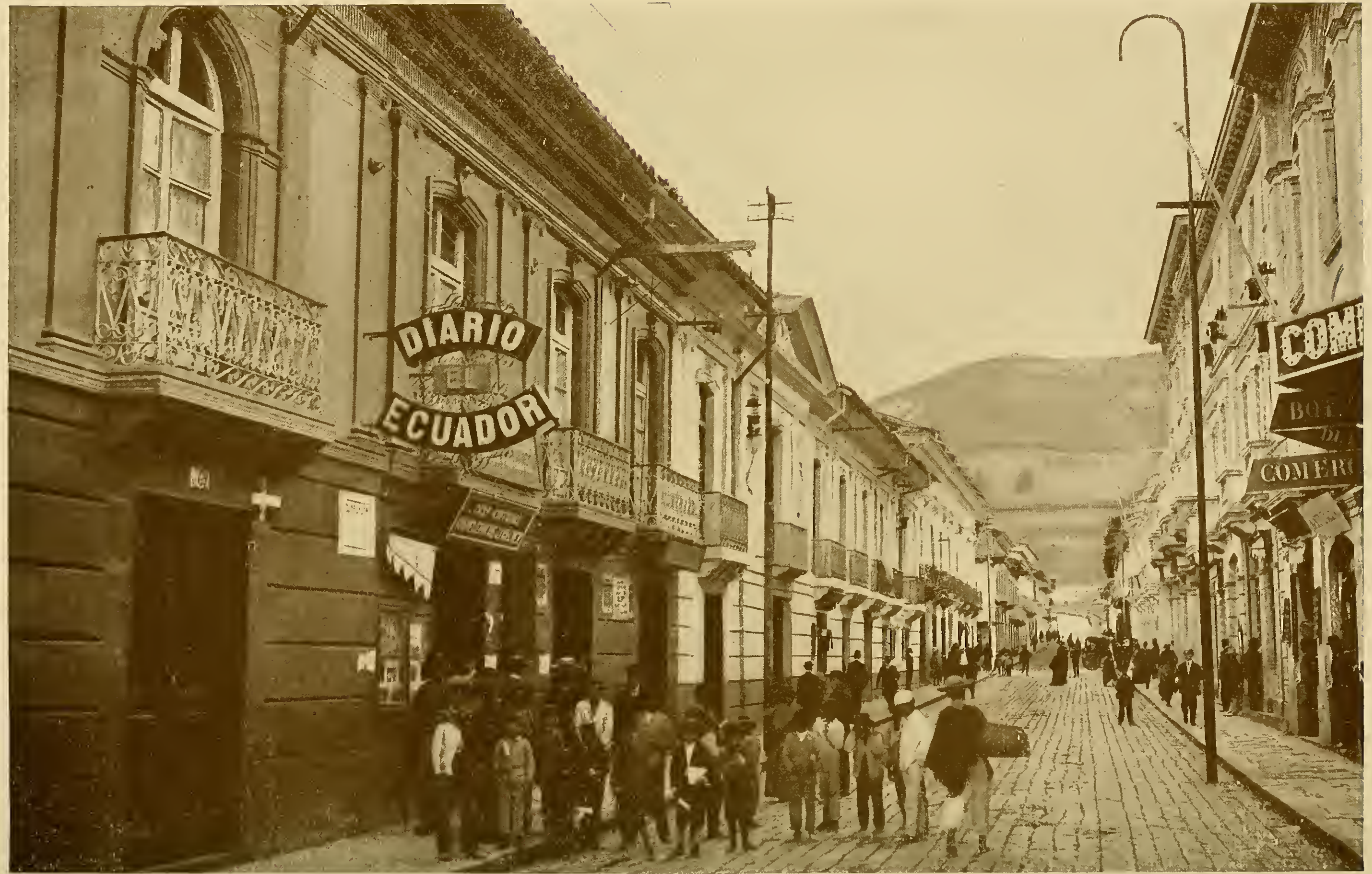
The railway from Ambato, on the Guayaquil, to Quito and to the Arajuano River toward the east, has been authorized and bids for its construction have been called for. The gauge of this line is to be 42 inches and the maximum price of the work of construction is to be $2,997,000. Another railway from Huigra to Cuenca, the third city of the Republic, is under construction, but work was stopped during 1910, owing to unsettled conditions in the country. It is the intention of the Government to complete this as well as the other lines now under construction as soon as possible, as it is realized that their early completion will be a great factor in giving to Ecuador, through the development of her mineral and agricultural resources, a much more prominent place among the South American nations than she now occupies.

Some 20 steamers, as well as a number of sailing vessels and freight canoes, maintain an active coast and river service, most of the numerous rivers of Ecuador being navigable for considerable distances inland and affording excellent means of transportation. The Guayas River, at the mouth of which is the city and port of Guayaquil, is the most important of these waterways, being navigable for river steamers as far as Bodegas, 40 miles from Guayaquil, while smaller vessels can, during the wet season, reach Zapotal, some 200 miles inland. The Daule River is navigable for some 60 miles, the Vinces for 50 miles, while the Esmeraldas, Naranjal, Santa Rosa, Santiago, and Mira Rivers are all navigable during the rainy season for short distances, varying from 10 to 60 miles or more. The Amazon River, which in Ecuador is given the name of Marañon River, is navigable almost in its entirety, and thus the eastern slope of the Ecuadorian Andes may be reached by way of Brazil and the Amazon River and its tributaries.

THE PRESS OF ECUADOR.

Ecuador, in spite of the isolation among the highest Andes, of the almost immeasurable distances which separated that region from the rest of the world before the use of steam, and in spite of the remoteness of the capital, Quito, even from the seacoast of the presidencia, had a printing press set up among the mountains as early as 1760. This press, it would seem, had been introduced into the country by the Jesuits, and what is more remarkable for the time, they actually published a short-lived periodical called the Escuela de la Concordia, although all copies of it have long ago disappeared. From then onward, however, the press was utilized only for the printing of religious tracts, court news, or public and official announcement.

The first newspaper, if it may be so called, was the Gazeta de Santafe, small in size and of little importance, but a beginning, and it was published in 1785, in Quito. As the struggle for independence became more powerful and one Republic after



PRINCIPAL STREET IN QUITO, "CARRERA DE VENEZUELA."

another was formed, the literature of the newspaper came greatly in demand, and Ecuador, with difficulty kept in touch with its neighbors, quite early felt the necessity of periodical publications. Both Quito and Guayaquil established papers, at first weeklies, with both foreign and domestic news in them, and finally they had daily newspapers, with the characteristics of the Spanish press, modified by the relatively closer relationships with American spirit and ideas. They were not, as a rule, however, of long life, but they served their purpose at the time. The oldest paper in point of age is Los Andes, founded in Guayaquil in 1863. Other cities, Cuenca and Ibarra, had their publications also, and in them are still substantial periodicals, some daily newspapers, but mostly weeklies or monthlies, largely devoted to literary, artistic, and scientific matters.

The daily newspapers of Ecuador, such as they appear to-day, vary in size. The smaller ones measure 12½ by 17½ inches, the larger 18 by 25 inches, but all of them are of four pages (two sheets) unless extra pages are attached to a number to contain the special news that may have been received. Five or six columns are the rule. Generally speaking, they carry no or only a few advertisements on the first page, this being reserved for reading matter, telegrams, or articles of a governmental or political character. On the other hand, the last page is usually filled with advertisements, leaving only enough reading matter to catch the reader's eye. Illustrations are freely inserted in the ads, but are seldom employed in the text, although in this respect a considerable change is noticeable of late, photographic reproductions appearing more frequently, as presses of higher grade are substituted for those of a worn out pattern. The inside pages have both news and advertisements, side by side.

Advertising rates are preferably based upon the column centimeter (two-fifths inch), and varies according to the page selected. The minimum cost, in newspapers of good standing, is about $0.10 (gold) for that unit, each insertion, but lower terms can be obtained in special cases, and particularly if time contracts are made. In one or two instances papers under the same management are issued simultaneously in both Quito and Guayaquil, which is an advantage in favor of the advertiser.

CORPS OF CADETS FROM THE MILITARY SCHOOL.

GUATEMALA

The Republic of Guatemala has a total area of 48,290 square miles, with a population (estimated 1910) of 1,992,000, or about 40 per square mile. With the exception of a small strip along the coast, the Republic lies at an altitude of from 4,000 to 11,500 feet. The chain of mountains which traverses its territory and sends out a number of spurs forms several plateaus, which are extremely healthful and fertile, and on which products of the Tropical and Temperate Zones are successfully grown. The coffee exported from Guatemala is noted for its excellence, and sugar, cacao, tobacco, and bananas are also grown for export. A limited trade is carried on in rubber and in various classes of cabinet and other woods. Placer gold mines, also silver and salt mines, are worked.

COAT OF ARMS OF GUATEMALA.

Upon separation from the other Central American States Gautemala adopted the unitary republican form of government, with powers vested in the legislative, executive, and judicial branches. The National Assembly consists of one chamber only, composed of 69 members, 1 for every 20,000 inhabitants or fraction thereof over 10,000, elected by direct vote of the people for four years, all citizens over 21 years of age who are able to read and write having suffrage. It meets annually in the city of Guatemala on March 1 for a period of two months, which may be extended for another 30 days. It may be called in extraordinary session by the President of the Republic or by the standing committee of Congress, the latter consisting of seven members elected by the assembly to represent it when not in session.

The President is elected by direct vote. His term of office is six years, at an annual salary, with allowances, of 60,000 pesos paper (about $3,600). He is assisted by a cabinet of 6 secretaries and by a council of state composed of 15 persons, of which the cabinet officials are ex-officio members, 5 councilors being elected by the assembly and 4 appointed by the President. There is no vice-president, but two designados are elected by the assembly, who take the place of the President in their respective order in case of his absence, death, or inability to serve. The President, the designados, and cabinet are as follows:

President, Sr. Lic. Manuel Estrada Cabrera (inaugurated March 15, 1911).

First Designado, Gen. Mariano Serrano.

Second Designado, Gen. Manuel Duarte.

Secretary of Foreign Relations, Dr. Luis Toledo Herrarte.

Secretary of Government and Justice, Sr. José M. Reina Andrade.

Secretary of the Treasury and Public Credit, Sr. Guillermo Aguirre.

Secretary of War, Gen. Luis Ovalle.

Secretary of Public Instruction, Sr. Joaquín Méndez (in charge).

Secretary of Fomento (Promotion), Sr. Joaquín Méndez.

The Department of Foreign Relations (Secretaría de Relaciones Exteriores) attends to the maintenance of friendly relations with foreign countries through the diplomatic and consular corps, the adjustment of international boundary disputes, and similar matters.

The Department of Government and Justice (Secretaría de Gobernación y Justicia) supervises the affairs of the Departments and municipalities and has charge of the administration of justice through the supreme court and minor courts. The police force of the cities and rural districts, the civil and real-estate registers, the various asylums, charitable institutions, and cemeteries, as well as the Government Printing Office, where the Diario Oficial and other official publications are printed, are also under this department.

PRESIDENT MANUEL ESTRADA CABRERA.

The Department of the Treasury and Public Credit (Secretaría de Hacienda y Crédito Público) is intrusted with the administration of the public funds, the service of the public debt, and the preparation of the budget of revenues and expenditures. It has charge of the customhouses, internal-revenue offices, and the national chemical laboratory, and controls the various Government monopolies, such as the manufacture of liquors, tobacco, explosives, and cartridges.

The War Department (Secretaría de Guerra) has charge of all matters pertaining to the regular army, and of the militia of the various departments, and the military schools.

The Department of Public Instruction (Secretaría de Instrucción Pública) administers the elementary public schools as well as the high schools, the National University, and other educational institutions maintained by the Government.

The Department of Promotion (Secretaría de Fomento) promotes the natural resources, encourages industries in every possible way, and has charge of means of communication and transportation. Some of its more important sections are those of agriculture, pisciculture, mines, industries, and commerce, registration of patents and trademarks, public works, national telegraphs and telephones, post offices, immigration and colonization, banks, promotion of sciences, letters, arts and fine arts, railways and other means of transportation, archæology, ports and steamships, publications of propaganda, and roads and bridges. The National Museum and the agronomic and agricultural experiment stations are also under its jurisdiction.

The national supreme court, six courts of appeal, and minor courts comprise the judiciary of the country. The supreme court consists of five members and the courts of appeal of three members each, all elected by direct vote of the people.

The active army consists of 7,000 officers and men. There is a reserve force of citizens between the ages of 18 and 30 years of 56,900, and an auxiliary force of 30,000 consisting of those between the ages of 30 and 50, military service being compulsory. A navy has not yet been built.

TEMPLE OF MINERVA, GUATEMALA CITY, GUATEMALA.

On October 28, 1899, President Manuel Estrada published a decree setting apart the last Sunday in October of each year as a national holiday to celebrate the benefits of public instruction. The exercises and festivities are participated in by teachers, pupils, and the general public, and are held in temples erected and dedicated to this purpose.

Guatemala has about 200 post offices, which handled during 1910 a total of 9,069,705 pieces of mail matter. The national telegraph and telephone systems comprise lines aggregating in length some 4,000 miles, operated from over 200 offices.

The Republic is divided politically into 21 Departments, each of which is again subdivided into districts. The highest authority in the Department is the jefe político, who is appointed by the President.

GUATEMALA IN 1910.

During the year the Republic remained in peaceful relations with the world. At the centennial celebrations of Argentina, Chile, and Mexico, Guatemala was represented by special delegations, and at the Fourth International American Conference a prominent part was taken by delegates from the Government. Just at the close of 1910 arrangements were completed for the welcome in the city of Guatemala of the delegates to the Third Central American Conference to meet on January 1, 1911. The labors of this conference are to be of undoubted benefit to Central America and to those interested in the welfare of the Republics composing that area. The National Government ratified many conventions passed in previous international conferences, among them being one for the construction of a Central American Pedagogic Institute; others for the unification of Central American currency and of the weights and measures; another prescribing the duties of the International Central American Bureau; and a convention regarding the Central American consular service.

VIEW OF LAKE ATITLAN ABOUT 35 MILES SOUTHEAST OF QUEZALTENANGO, GUATEMALA.

Volcanoes of San Pedro and the two Atitlans towering in the background.

One of the notable accomplishments of the year was the governmental activity in vaccinating a large portion of the inhabitants (207,463) against smallpox. So successful was this measure, carried out, it should be remarked, by vaccine matter supplied from the national institute, that the country is to-day practically free from that disease. By this and other measures the public health has reached a high standard, the births exceeding the deaths by almost 40,000.

In respect to finances, the national revenues were greater in 1910 than in 1909, and even showed an increase over the estimates of the budget for the year. The revenue was greater also than the expenditure.

Agriculture has been advancing. Both maize and rice, which have in former years been imported to meet the needs of the people, were grown in 1910 in sufficient quantities for that purpose, and that, too, with no appreciable increase of price to consumers. The area of rice cultivation has extended from the coastal region to the higher interior, to the advantage of all concerned. Wheat yielded very good returns, and it was satisfactorily demonstrated that this grain will produce two crops a year in favorable sections of the country, and that also new areas can be developed for its cultivation. The exhibits on these and other points made at the annual agricultural show are in every sense encouraging.

Successful exhibition of natural products was one of the features at the Brussels exhibition, where Guatemala was well represented.

Continuous and careful attention was given by the Government, under the able and enthusiastic leadership of President Estrada Cabrera, to all the branches of public instruction, and the increase of public schools, the broadening system of industrial and intellectual teaching, and the interest taken in this advance by the public at large as well as by the pupils of the schools, are commendable features of Guatemala.

President Estrada Cabrera was in April, 1910, reelected for a third term in the executive office of the Government, to begin March 15, 1911.

FINANCE.

The total revenues of the Government according to the message of President Sr. Don Manuel Estrada Cabrera, presented to the National Legislative Assembly on March 1, 1911, amounted for the year 1910 to 51,571,440.69 pesos paper, and the expenditures to 45,959,410.06 pesos paper. The receipts exceeded the receipts of the preceding year by 20,571,440.69 pesos paper.

The ordinary expenditures for the administration amounted to 17,358,293.67 pesos paper, and the expenditures on account of public credit to 28,601,116.40 pesos paper.

The gold premium in Guatemala fluctuates within wide limits. During the year 1910 it was variously estimated at from 900–1,500. This would give a value to the paper peso in American gold of from 10 cents to about 7 cents.

DEBT.

The foreign debt of Guatemala is represented by 4 per cent bonds of 1895 amounting to £1,600,000. Of this amount £117,200 have been redeemed, leaving outstanding £1,482,800. To this amount must be added unpaid interest to December 31, 1910, amounting to £711,747, making a total of £2,194,547.

The interior debt on January 1, 1910, according to the report of the director general of the general direction of accounts, amounted to $3,674,286.08 gold.

FOREIGN COMMERCE.

The total foreign trade of Guatemala for the year 1909, according to the report of the minister of finance of March 1, 1910, amounted to $15,330,536. The figures are given in the report in United States gold. The imports were $5,251,317 and the exports $10,079,219. In 1908 the imports were $5,811,586 and the exports $6,756,143, or a total of $12,567,729. There was, therefore, an increase for the year 1909 as compared with the preceding year of $2,762,807, the imports showing a loss of $560,269 and the exports a gain of $3,323,076.

IMPORTS.

The value of imports from the different countries into Guatemala for the years 1908 and 1909 is shown in the following table:

Countries.	1908	1909
United States	$2,148,325	$2,181,859
Germany	1,572,740	1,249,559
United Kingdom	1,327,301	1,135,420
France	262,435	273,215
Japan and China	148,019	121,852
Belgium	116,636	102,816
Spain	70,294	56,516
Italy	65,892	73,677
Mexico	37,050	14,740
South America	900	7,225
Central America	11,176	6,532
Cuba	5,420	5,527
Austria-Hungary	3,019	3,677
Portugal	260	170
Other countries	12,588	....
Terrestrial imports	29,531	18,532
Total	5,811,586	5,251,317

The imports by articles from the four leading countries during the year 1909 are shown in the following table:

	United States.	Germany.	United Kingdom.	France.
Textiles and manufactures:				
Cotton	$342,846	$234,445	$768,447	$27,822
Linen	16,395	85.844	75,907	7,932
Wool	3,942	84,361	24,461	54,869
Silk	6,079	14,485	6,989	14,487
Metals and manufactures:				
Iron	301,589	143,632	71,566	4,740
Railroad material	209,331	4,312	2,470	....
Copper, tin, etc	52,297	100,926	12,913	2,635
Machinery	86,966	85,807	53,680	245
Alimentary substances:				
Wheat flour	477,435	....	....	....
Wines, liquors, beer	54,848	46,035	20,271	75,982
All others	154,944	37,175	27,810	10,067
Mineral products:				
Petroleum	143,521	....	....	....
Coal	18,535	....	....	....
China and porcelain	6,706	38,479	8,000	3,235
Pharmaceutical products	86,346	62,300	17,331	46,828
Leather and manufactures	73,171	20,741	5,525	5,406
Wood and manufactures:				
Wood	49,919	....	743	....
Woodenware	24,505	46,004	3,546	6,104
Paper and manufactures	35,502	51,831	8,315	1,659
All other articles	138,892	193,182	27,446	11,204
Total	2,181,859	1,249.559	1,135,420	273,215

The imports, by ports of entry, for the year 1909 were as follows:

Puerto Barrios	$2,723,297
San Jose	1,230,504
Champerico	854,435
Livingston	271,179
Ocos	153,370
By the frontiers	18,532
Total	5,251,317

EXPORTS.

The value of exports from Guatemala to foreign countries for the years 1908 and 1909 is given in the following table:

Countries.	1908	1909
Germany	$3,939,207	$5,828,554
United States	1,776,676	2,739,075
United Kingdom	819,572	1,006,263
Austria-Hungary	92,026	148,878
Mexico	62,325	146,276
South America	26,252	120,697
France	8,661	32,748
Belgium	6,368	19,643
Italy	5	17,830
Central America	12,957	15,720
Spain	12,044	3,535
Japan and China	45	....
Total	6,756,143	10,079,219

Articles exported in 1909 from Guatemala were valued as follows:

Coffee, 88,162,742 pounds	$8,816,274
Hides, 1,543,426 pounds	308,685
Wood, 5,271,461 feet	263,573
Bananas, 765,223 bunches	229,566
Rubber, 347,253 pounds	173,626
Sugar, 5,102,048 pounds	153,066
Chicle, 224,607 pounds	71,874
Skins, 86,419 pounds	25,925
Other vegetable products	19,432
Other industrial products	5,310
All other articles	11,888
Total	10,079,219

The bulk of the leading export article, coffee, was taken by Germany (43,661,100 pounds), followed by the United States (17,994,440 pounds), United Kingdom (4,729,800 pounds), and Austria-Hungary (1,087,400 pounds).

The exports, by ports of clearance, were as follows:

San Jose	$3,004,985
Champerico	2,989,599
Ocos	2,157,473
Puerto Barrios	1,065,114
Livingston	579,142
By the frontiers	282,906
Total	10,079,218

PRODUCTS AND INDUSTRIES.

As there is good evidence that Indian corn was first found in the temperate valleys of old Guatemala, the cultivation of this staple should, in the natural order of things, become one of the wealth-producing occupations of the country.

CORN is the most universally consumed grain in the world save rice. It is the basic food element of all peoples except those popularly known as the yellow races. It furnishes nourishment to man, beast, and bird alike, and now it is found in every part of the world where soil and sun assure its rapid growth. Corn meal has a higher food fuel value than wheat flour; thus corn bread makes more bone and muscle than white bread.

Columbus discovered corn. There have been scientists who would deny him this honor, as there are carping historians who negative his claim to the discovery of

America. They cite Turkey corn as having originated in Asia, and produce a supposed drawing of the plant that adorns a Chinese natural history published in 1562. Again, it is claimed that corn kernels have been found in the cellars of ancient houses in Athens, and it is even suggested that Indian corn was in fact the "corn" of Scripture. Humboldt, however, holds most emphatically that maize originated in America, and an impartial study of the facts sustains this careful authority in his decision. There are two unanswerable arguments that can be put to those who would deny America as the birthplace of this plant, namely, "If corn were a product of Asia, why was there such slight previous evidence of the existence of this plant, which immediately took its place as one of the most extensively cultivated grains upon its introduction into Europe from the New World?" Again, "If maize was introduced into Spain in the thirteenth century, why should the corn brought to the court of Ferdinand prove such a curiosity?"

CULTIVATION OF MAIZE, ONE OF THE LEADING PRODUCTS OF THE FERTILE SOIL OF GUATEMALA.

When the stalks of Indian corn are cut in the field they are then gathered into large bundles at regular intervals and stacked in the open before being carried to the barns. These bundles are called "shocks," and they present one of the prettiest sights of harvest time.

Clearly, corn is native in the Western Continent. Maize is perhaps the more accurate name of the plant, and it is derived from a native Haitian word of Arawak derivation, "mahiz," which designated what in the United States is popularly called corn. Corn is a derivation of Anglo-Saxon origin and means grain or kernel, being applied to designate oats in Scotland and wheat in England. Zea Mays is the botanical name of the plant, which is monœcious (combining both sex factors on one stem), having a large feathery panicle at the summit and dense spikes of flowers or cobs at the axils of the leaves below, the long pink styles hanging out like a silken tassel, being invested by tightly imposed sheathes of leaves.

More than 300 varieties are known, which differ more among themselves than those of any other cereal. Some come to maturity in two months, others require seven months; some are as many feet high as others are inches; some have kernels

11 times larger than others. They vary greatly in size, shape, physical characteristics, and composition. The five great varieties are the Flint, Dent, Horsetooth, Sweet, and Green corn. This latter was the important food of the native Indians, and its seasons were always celebrated by religious ceremonies. It was the corn found in the Inca tombs, and undoubtedly furnished the conquistadores with a welcome ration on their expeditions.

Chemical analysis shows that it is a very nutritious article of food, being richer in albuminoids than any other cereal when ripe. It will grow from the sea level of the Tropics to the shores of Lake Erie. It prefers a deep, rich, warm, dry, mellow soil, generally bottom lands and fertile prairies. Its cultivation has spread around the world until now Indian corn can be found in every section of the globe save where the cold nights and excessive frost would kill the maturing grass.

CATTLE IN GUATEMALA.

The fine condition of this stock, which is by no means of the best blood, is due to the excellent natural cattle pasture, of which there is no better on the American Continent than that of parts of Guatemala, Honduras, Nicaragua, and Costa Rica.

The profitable production of corn demands a fertile soil, suitable conditions of climate, high quality of seed, and intelligent methods of cultivation, the first-mentioned factor being the most important. It is a far cry from the crude system of corn growing that served the Indians of Guatemala and Mexico to that which yields the modern farmer a harvest of a hundred bushels an acre. It is only after years of experiment that corn cultivation has been brought to the present state of high scientific precision whereby the scriptural admonition anent making two blades of grass grow where but one grew before has been literally carried out. Within the last year competitions in corn growing have been held in many States, with the result of a surprisingly increased acreage yield. Not alone in quantity is improvement found, but also in quality, for the corn growers' associations offering the prizes use a system of scoring which demands that corn grown in competition shall conform to certain standards involving trueness of type and regularity of characteristics.

The corn cakes of the Mayan Indians were the first culinary products of maize, and these were practically identical with the tortilla which enters so largely into the diet of the native Mexicans and Guatemalans to-day. Hasty pudding, hominy, corn bread, cornstarch, and samp are some of the forms under which this plant finds its way to the table at present. As an article of diet it is much more popular in America and India than in Europe, where a prejudice exists against corn, because there it is more a cattle and swine fattening food. There are upward of 100 corn products. These include flour, meal, starch, sugar, alcohol, whisky, oil, rubber substitutes, cellulose, beer, glucose, pipes, and cigarette and other paper. It enters so largely into the life of the citizen of the United States that the corn crop has become the measure of national prosperity.

Every Latin-American country produces corn. From Mexico in the north to Argentina in the south green fields of the grass refresh the eye of the traveler everywhere, in season. In fact, these countries account for one-half the world's export of maize to-day and show a steady increase of production year after year.

The annual corn production of the world ranges from two and one-half to three billion bushels, and the Americas supply fully three-fourths of this. But that amount is but a small portion of what will be produced in the future, and as a field for profitable corn cultivation no country offers greater opportunity than Guatemala.

Coffee is the leading article of Guatemalan production and export, the amount shipped out of the country in 1909 being over 88,000,000 pounds.

Banana growing is one of the newer but most profitable industries of the country. Many plantations have been established on the eastern coast, especially in the vicinity of Puerto Barrios. The yield of this fruit in Guatemala is approximately 15 bunches per month per acre, and the climatic conditions in this section of the Republic appear to be well suited to its development.

Sugar is profitably grown in increasing quantities, over 5,000,000 pounds having been exported in 1909. Cotton cultivation has been very much encouraged by a special decree of the Government to that end.

In its cultivated lands on the Atlantic, Guatemala affords the prospective rubber planter every condition necessary for the successful development of this highly profitable plant. These conditions are good soil, warm climate, and humidity well distributed throughout the year.

The encouragement of agriculture in all its branches is the subject of governmental aid, it being desired not only to improve the methods of cultivation employed in the growing of such staples as coffee, bananas, cacao, and sugar, but also to introduce new cultures. The establishment of experimental gardens and stations for the cultivation and distribution of native and foreign plants for private enterprise, the opening of agricultural expositions for the display of the various animal and vegetable products of the country, and the protection afforded to coffee growers, are all parts of this progressive policy.

The cattle industry is developing and considerable quantities of hides are annually exported. With the increasing price of meat in all foreign countries, this industry should prove a profitable one in the Republic.

The development of the timber reserves of the country is occupying official attention, valuable concessions having been granted covering the cutting and export of cabinet and dye woods, the extraction of chicle and other gums, and the adequate stimulation of the rubber industry.

Mines of gold, silver, copper, iron, lead, zinc, and antimony are known to exist in various sections, but have hitherto been inadequately investigated. The lack of development of this important branch of industry is attributable in a great degree to insufficient transportation facilities. Placer gold mines are worked, and there is a group of silver mines from which considerable metal is sent abroad.

The manufacturing interests of the country are confined chiefly to the textile industry, raw cotton and cotton yarns figuring on the import list. Candles and soap are manufactured, ice factories exist in the capital and elsewhere, and the manufacture of furniture has become a valuable national industry, owing to the abundance

A PICTURESQUE SCENE IN GUATEMALA.

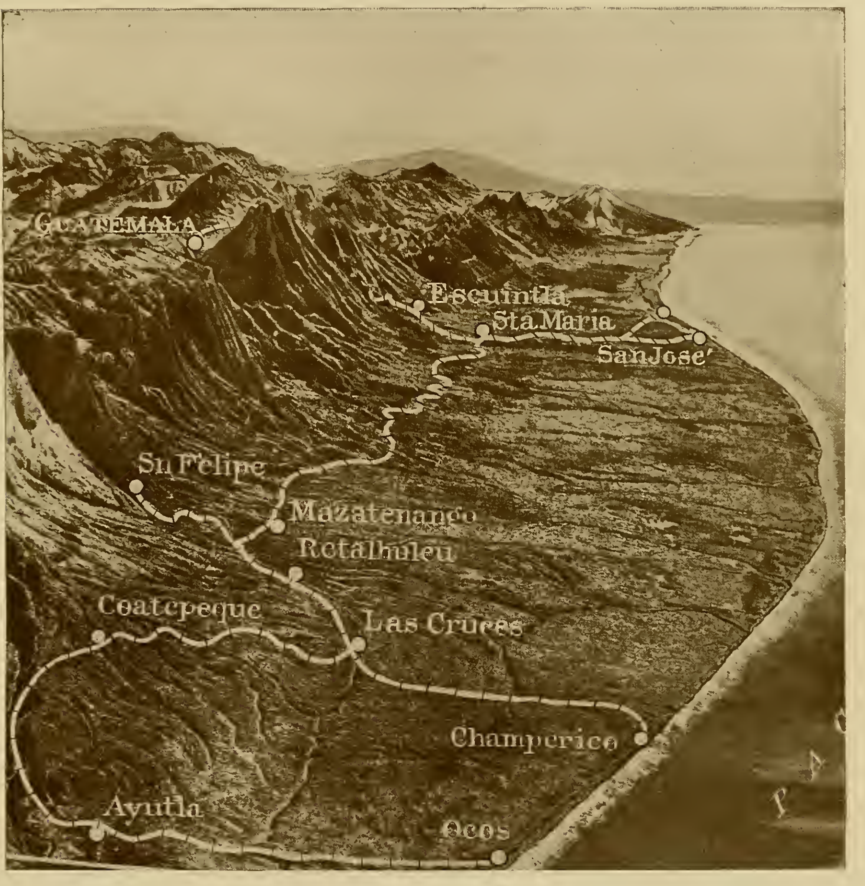
An illustration of the country's exuberant vegetation so much admired by Humboldt.

of fine cabinet wood. Small works produce footwear, straw hats, and pottery. Breweries, sugar mills, and tanneries are also profitably conducted.

RAILWAYS AND INTERIOR WATERWAYS.

The railways of Guatemala have a total extent of 724 kilometers (450 miles), practically all of which have a 3-foot gauge. There are five lines, as follows:

The Verapaz Railway, on the eastern coast, running between Panzos and Pancajche, a distance of 28 miles, is a German company, and gives outlet to the rich Verapaz district of the Republic through Lake Izabal, the Dulce River, and the port of Livingston.



RELIEF MAP OF THE GUATEMALA RAILROADS ON THE PACIFIC COAST.

The Guatemala Central, the oldest line in the Republic, ran originally from San Jose, on the Pacific, to Escuintla, and later to the city of Guatemala. This company finally extended its line westward to Mazatenango. Here, a few years ago, it was joined by the Occidental Railway, built from Champerico, on the Pacific, through Caballo Blanco and Retalhuleu, as far as San Felipe. The Central and the Occidental are now combined under one management and have a total length of 189 miles. The Ocos Railway starts at Ocos, on the Pacific, and runs parallel to the Suchiate River, the boundary between Guatemala and Mexico, as far as Ayutla, where it turns to the east and ends at Vado Ancho. Its length is only 23 miles.

The newest railway is the Northern, or Guatemala Railway, from Puerto Barrios, on the east coast, to the city of Guatemala, a distance of 195 miles. This line also has 15 miles of banana railroads in operation.

The Guatemala Railway Co. has contracted with the National Government to build a railway from Zacapa to the frontier of Salvador. This line will be extended, under a concession from the Government of Salvador, to Santa Ana in that Republic, where it will join the Salvador Railway.

On November 21, 1910, the birthday of President Estrada Cabrera, work on the Guatemala section of the Pan-American Railway was formally inaugurated. This section is in charge of the Guatemala Central Railway, and will connect that line from Las Cruces, through Ayutla, on the Mexico-Guatemala frontier, by a bridge across the Suchiate River at that point, with the Pan-American Railway in the State of Chiapas, Mexico. This section will be about 38 miles (60 kilometers) long. On the same day work was begun on the line which will connect Quezaltenango with the Central Railway.

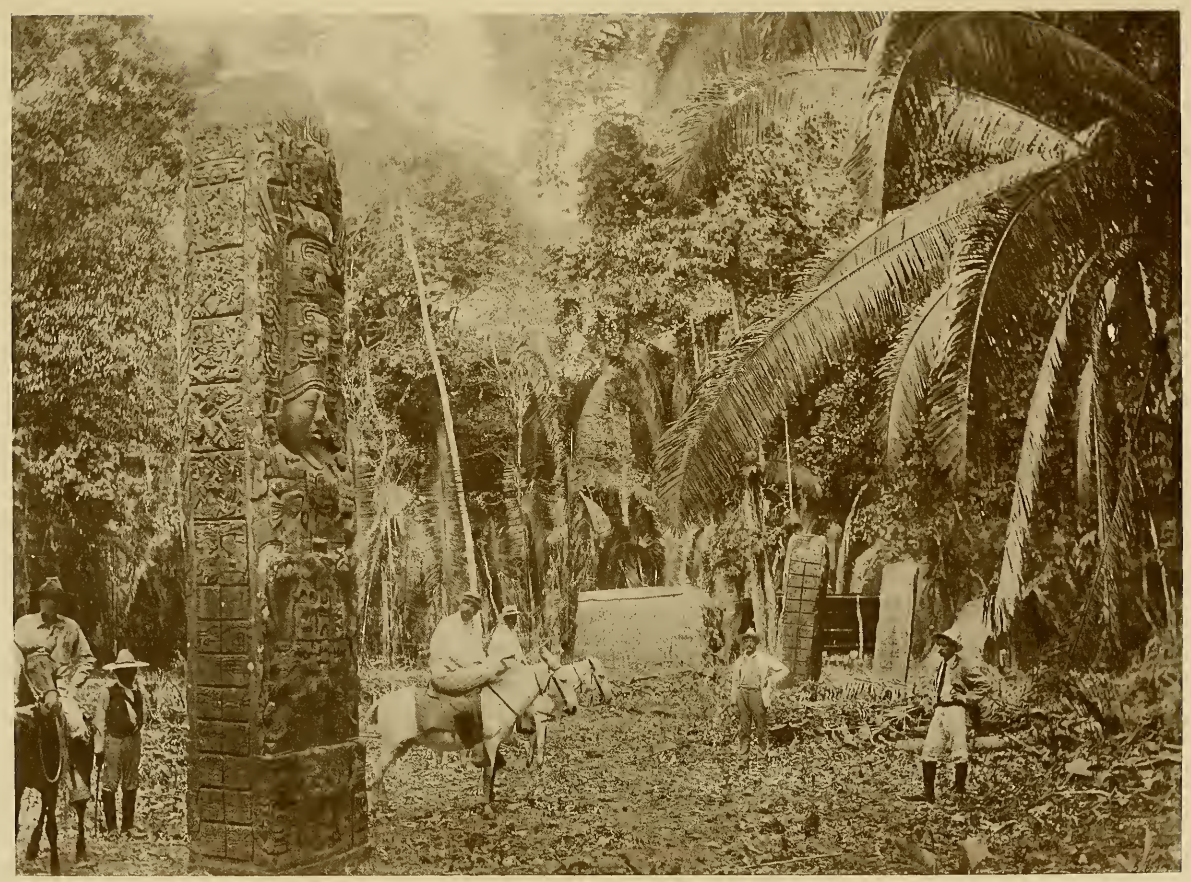
THE PRESS OF GUATEMALA.

The old Spanish colony was called Guatemala, and embraced all of Central America as known to-day. Many of the present cities, including among them the capitals San Salvador, San Jose, and Tegucigalpa, were simple villages at the beginning, or, like Managua, had not been founded at all. Therefore the word Guatemala implied before the revolution the entire Central American isthmus.

In 1660 the first printing press for this region was set up in the ancient city of Guatemala, now called Antigua, where the intellect and culture of the colony had settled. The first book was published in 1663. Schools, religious orders, and a university were founded, and the capital, especially after its removal to the present site, when Antigua was overwhelmed in 1773, retained its reputation for learning. In the first quarter of the next century, November 1, 1729 (only a year after Mexico's Gazette), the Gaceta Mensual (the Monthly Gazette) was established there, and this became later the Gaceta de Guatemala. In 1815 another periodical, devoted to political and sociological studies, was started. This was the beginning of the period when the revolt against Spain was agitated, and papers sprang into being with vehement activity. On July 24, 1820, appeared the first real newspaper, the famous Editor Constitucional, in whose pages patriotism and Americanism were defended without disguise. Others followed, calling themselves newspapers, and actually giving news, but adding a full measure of politics also. During the era of reconstruction, which lasted for a generation, the periodicals were more literary than journalistic. In 1880 an Englishman founded the Diario de Centro America, a daily paper still in existence.

In Guatemala City, the capital of the Republic, a dozen periodicals are registered, four of them, including the Government official paper, being dailies. In only a few of the other cities are papers published. They differ noticeably in size, from 16 to 22 inches wide and from 22 to 28 inches long, and from 4 to 8 and 10 pages, but all have six columns to a page. News items are the principal feature of the first page, but advertisements are given considerable space. Other pages are divided about equally between reading matter and advertisements. The unit of advertisements is the column inch, the rates for which are relatively low, averaging not more than 5 cents gold for this unit each insertion, and up to $10 gold a page. Reductions are made for continuous contracts. The circulation is probably not more than 4,000 in any case.

During the year five of the the leading papers of Central America, one from each country, organized the Central American Press Association. Regular press conferences will be held, the first one in 1911, at which the entire press of Central America will be invited to join the association. The five original members are El Diario (Guatemala City); La República (San Jose, Costa Rica); El Diario de Nicaragua (Managua, Nicaragua); La Prensa (Tegucigalpa, Honduras); and El Diario del Salvador (San Salvador, Salvador).



REMARKABLE STELÆ AT THE RUINS OF QUIRIGUA IN GUATEMALA.

The carvings and ornamentations of the ruins at Quirigua have furnished an interesting field for research to students of archæology.

HAITI

The Republic of Haiti, occupying the western portion of the island of the same name, has an area of 10,200 square miles, and a population of 2,000,000. It is one of the most populous of the American Republics, taking into account its area, with 196 inhabitants to the square mile. Haiti is a land of mountains and valleys, and inclosing the Gulf of Gonave, around whose shores are several fine natural harbors. The principal products of the island are coffee, cacao, cotton, tobacco, sugar, and logwood. In the forests and deep valleys there is a wealth of flora unsurpassed in the western world. Haiti also possesses considerable undeveloped mineral resources, among them being gold, silver, copper, iron, nickel, gypsum, limestone, and porphyry. A number of small islands belong to the territory of the Republic; Gonave, about 40 miles long; La Tortue, 33 miles long; Les Cayemites, and a number of smaller islands.

COAT OF ARMS OF HAITI.

The constitution of the Republic of Haiti was proclaimed on the 9th day of October, 1889, and a unitary republican form of government was adopted, vesting the administration in a legislative, executive, and judicial branch. The legislature is composed of two chambers—a Chamber of Representatives and a Senate, the two together forming the National Assembly. The Chamber of Representatives consists of 99 members, elected by the people for a term of three years, and the Senate of 39 members, chosen by the Representatives from lists furnished by a board of electors and by the President of the Republic, for a term of six years. The Senate is renewed by thirds every two years. The National Assembly meets annually on the first Monday in April for a period of three months, which may be extended for another 30 days. The President of the Republic is elected by the National Assembly for a term of seven years and can not be reelected except after an interval of at least one term. He receives a salary of approximately $24,000 per annum. A cabinet of six secretaries, each in charge of some department of the Government, assists the President. They are appointed by and responsible to him, and receive an annual salary of about $6,000 each. The departments delegated to the various secretaries of state are as follows: Foreign affairs and public instruction; war and navy; interior and general police; finance and commerce; justice and worship; public works and agriculture.

The President, Cincinnatus Leconte, was inaugurated on August 16, 1911, and, according to a cable dispatch, constituted the following cabinet:

Secretary of Foreign Relations, Mons. Nicholas Leger.
Secretary of War and Navy, General Limage.
Secretary of Interior and General Police, Mons. Sansarique.
Secretary of Finance and Commerce, Mons. Edmond Lespinasse.
Secretary of Public Instruction, Mons. Guilbaud.
Secretary of Public Works and Agriculture, Senator Laroche.

The Department of Foreign Relations and Public Instruction (Secretairerie d'Etat des Relations Extérieures et de l'Instruction Publique) has charge of the diplomatic and consular service, matters pertaining to intercourse with foreign nations, also supervision over the public schools and higher education in the country.

To the War and Navy Department (Secretairerie d'Etat au Département de la Guerre et de la Marine) are delegated the usual duties of military and naval divisions. The foundry, shipyard, and service of the ports are also part of its functions.

PRESIDENT CINCINNATUS LECONTE.

The Department of Interior and General Police (Secretairerie d'Etat de l'Interieur et de la Police Générale) is charged with the administration of the Provinces or "arrondissements" and of the "communes," through the governors and other executive officers appointed by the President, and the councils elected by the people. Under this branch fall also the regulation of the police, fire, sanitary, penal, and charitable institutions. Matters pertaining to elections, taking of census, the Government printing office, and the official publication are all under the supervision of this department.

Intrusted to the Department of Finance and Commerce (Secretairerie d'Etat des Finances et du Commerce) are the collection and disbursement of the public finances, preparation of the annual budgets administration of the customhouses, the publication of the commercial statistics, and the general promotion and regulation of commerce and industry.

Responsible to the Department of Justice and Worship (Secretairerie d'Etat de la Justice et des Cultes) is the judiciary of the Republic, commercial tribunals, and justices of the peace. Under the supervision of this department also come the clergy and churches of all denominations as well as those of the official religion.

The Department of Public Works and Agriculture (Secretairerie d'Etat des Travaux Publics et de l'Agriculture) is intrusted with the maintenance and construction of all public works, public buildings, harbor improvements, railways, roads, bridges, postal and telegraph service. The development of the mineral resources and encouragement of agricultural activities are also within the scope of this branch of the Government.

The supreme court is the highest tribunal of justice. The "Tribunal de Cassation" combines the functions of a court of appeals and a supreme court in a certain way. There are also a number of district and municipal courts, and other tribunals of special jurisdiction.

ST. MARTIAL SEMINARY COLLEGE, PORT AU PRINCE, HAITI.

In Haiti instruction is compulsory and free in the public schools. A good education can be had by all Haitians without expense except of maintenance. Indigent pupils are assisted.

The national army of Haiti, in addition to 2,000 gendarmes, has 12,060 officers and men. The navy comprises six cruisers.

Haiti became a member of the International Postal Union in 1880. There are now in operation throughout the Republic 30 post offices. The principal towns are connected by numerous telegraph lines. The number of miles of telegraph lines is estimated at 124. There are adequate cable connections with Cuba, the Dominican Republic, and South America.

The Republic of Haiti is divided into five Departments, which are again divided into "arrondissements," these into "communes," and the latter into sections or districts. The governors and other executive officers of the Departments are appointed by the President of the Republic.

HAITI IN 1910.

During 1910 the Republic maintained peaceful relations with the other nations of the world. Boundary disputes between Haiti and the Dominican Republic occupying the eastern part of the island were for some time unsettled, but it was finally agreed by the two Governments to refer the matter to the decision of the court at The Hague. Representatives were sent by the Republic to several international meetings, among them the Pan American Conference at Buenos Aires, and a committee, acting in the interests of Haiti alone, was dispatched to Paris to make a careful study of financial conditions with especial reference to local financial reform. The result was a bill providing for a new bank in the Republic, which was ultimately approved, and the institution, which has a national character and bears close relation to the treasury, was opened for business toward the end of the year. A parcels-post agreement was entered into between Haiti and the United States, which, although not countervening any of the articles of the Universal Postal Union, of which Haiti is a member, yet will facilitate communication between the people of both countries.

THE NATIONAL PALACE AT PORT AU PRINCE, HAITI.

Incomplete reports would seem to indicate that commercial conditions for the year were satisfactory, but full returns upon which alone estimates can be based are not yet available. A serious effort was made by the Government to balance the budget. In many directions improvements were begun or authorized, to show that the country was ambitious to be brought up to modern standards. A compulsory education law, applicable to the primary grades, was passed, and a new water system for the capital, Port au Prince, was approved and the contract for the Haitien National Railroad was signed. Haiti has given noticeable encouragement to foreign investors during this and former years, and the advances which will follow liberal concessions of this kind are sure to benefit the country materially within a short time.

FINANCE.

The Pan American Union has received no reports, official or otherwise, of the actual receipts and expenditures for the year 1910 (year ending Oct. 1).

PORT DE PAIX, HAITI, CAPITAL OF THE NORTHWEST DEPARTMENT.

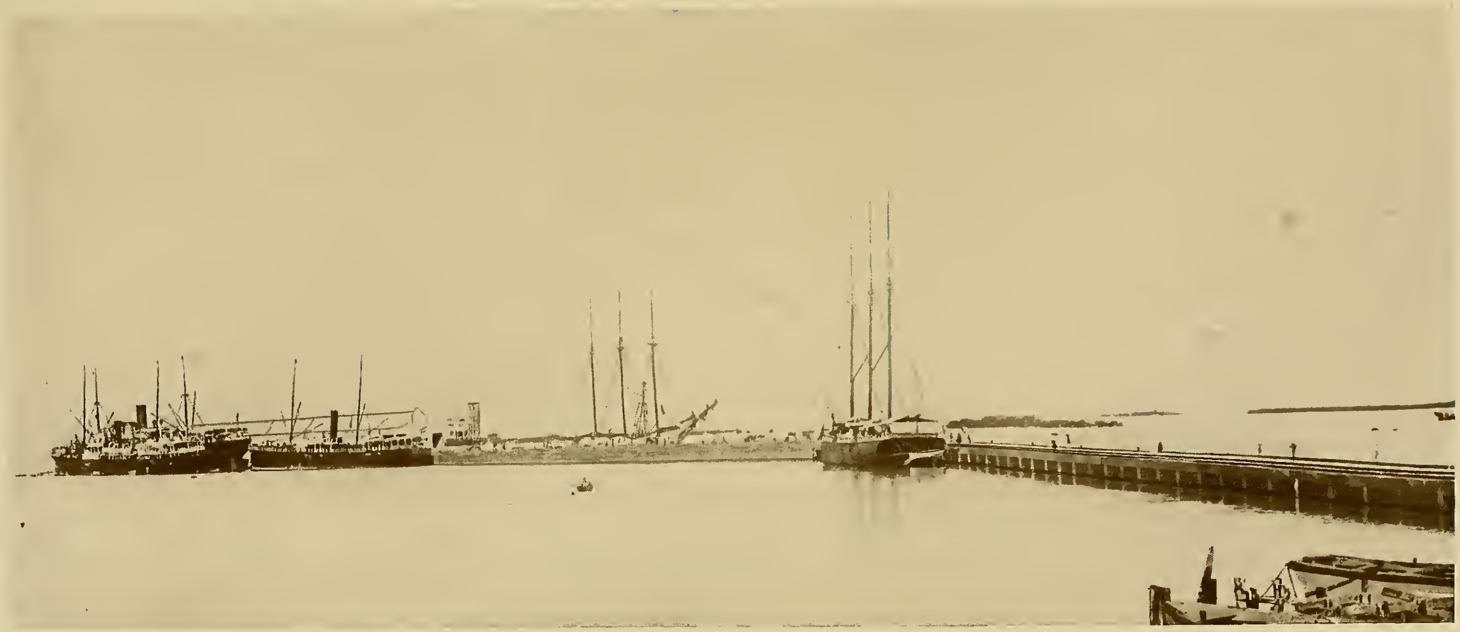
The budget for the year estimated the gold and the paper receipts as follows:

	Gold.	Gourdes, paper.
Customs duties	$3,621,181.59	2,393,571.89
Public lands	8,200.00	45,948.43
Postage stamps	20,201.26	18,619.66
Registration and mortgages	27,865.52	40,456.26
Telegraph	16,195.16	26,263.70
Notary fees		10,547.48
Moniteur (official journal)		558.00
Documentary stamps, license, etc	98,083.72	71,641.64
Stamped paper		97,295.79
Hydraulic bureau of Port au Prince		63,617.44
Various receipts	165,500.00	5,458,795.60
Total	3,957,227.25	8,227,315.89

From the amount set down in the column of the receipts in gold was to be deducted over $600,000 gold to be converted by sale into paper. The gold premium was estimated at 400, to produce an amount of over 3,000,000 paper. In this same column are listed as receipts 1,750,000 gourdes from the loan of 2,500,000 gourdes. These two items are included under "Various receipts."

The total of the budget estimates of expenditures, of which the details are not available, was $3,329,010.35 gold and 8,246,837.74 gourdes, paper.

On September 9, 1910, President Simon approved a law enacted by the National Assembly validating expenditures already made by the several departments to the



NEW WHARF AT PORT AU PRINCE, HAITI.

Splendid wharf of reenforced concrete now in operation at Port au Prince, considered the finest in the West Indies and the largest in the world, where the Ripley system of concrete piling has been used. The cost of constructing this harbor improvement is given at $325,000.

amount of $212,304.54 gold, and 1,324,915.22 gourdes, paper, and authorizing additional expenditures of $693,327.11 gold, and 1,796,338.12 gourdes, paper.

Taken together the supplemental credits to the departments were as follows:

	Gold.	Gourdes, paper,
Finance	$50,007.01	125,656.23
Interior	318,995.52	998,048.75
War	78,609.20	1,357,004.92
Navy	319,239.24	175,917.80
Public Instruction	5,580.00	52,100.00
Foreign Relations	21,044.78	1,000.00
Justice	9,500.00	27,395.75
Public Works	70,905.90	384,129.89
Agriculture	29,500.00	
Public Worship	2,250.00	
Total supplementary credits	905,631.65	3,121,253.34
Budget authorizations	3,329,010.35	8,246,837.74
Total expenditures authorized	4,234,642.00	11,368,091.08

In the report of the minister of finance, Monsieur Ed. Pouget, presented to the National Assembly on May 16, 1910, the customhouse receipts for the first three months of the fiscal year 1910 are given as $970,120.50 gold and 726,852.57 gourdes, paper. The receipts for the same period of the preceeding year were $619,876.91 gold and 803,752.91 gourdes, paper.

The gold premium in Haiti fluctuates within wide limits, so it is difficult to give a figure even approximately the average for the year. At 400, the figures mentioned above, the amount of paper revenues estimated for 1910 (8,227,315.89 gourdes) would be $1,645,463.17, which added to the gold revenue, as estimated, makes $5,602,690.42. The expenditures, gold and paper, as estimated in the budget, with the paper converted into gold at 400 premium, would produce $4,978,378.70. If to this be added the supplementary credits, the total expenditures authorized amount to $6,508,261.01.

DEBT.

According to the report of the minister of finance referred to above the total of the debt on March 31, 1910, was as follows:

FOREIGN DEBT.

Loan 1875	$2,701,507.50	
Amortization in arrears	1,065,307.50	
		$3,766,815.00
Loan 1896	7,958,906.25	
Amortization in arrears	622,875.00	
Total foreign debt		8,581,781.25
		12,348.596.25

INTERIOR DEBT.

2½ per cent treasury bonds (pink)	2,738,047.57	
2½ per cent treasury bonds (blue)	2,297,135.33	
6 per cent consolidated bonds	3,869,880.60	
3 per cent consolidated bonds	1,379,793.65	
6 per cent united loans	2,087,994.88	
	12,372,852.03	
Interest in arrear	25,604.75	
		12,398,456.78
Special bonds and obligations		1,589,794.13
Total gold debt		26,336,794.16

	Gourdes, paper.
Paper money in circulation	8, 440, 812. 00
Other bonds and obligations	1, 597, 624. 25
Total paper debt	10, 038, 436. 25

FOREIGN COMMERCE.

There has been no publication, official or other, of the foreign trade of the Republic later than for the year 1909 (fiscal year ending Oct. 1). The report of the minister of finance presented to the National Assembly on May 16, 1910, gives for 1909 the total value of imports at $5,880,678, and in addition the values by countries. In exports only the principal articles by quantities are given. In a British consular report the value of the exports for the year is given at $11,008,483 (the United States minister to Haiti reports the same figures). These reports taken together show a total trade of $16,889,161.

The figures for the preceding year were: Imports, $4,701,160; exports, $17,399,200; total, $22,100,400. There was therefore for the year 1909 a gain in imports of $1,179,518, and a loss in exports of $6,390,757—a net loss in the total trade of $5,211.239.

IMPORTS.

The following table compiled from reports of the minister of finance shows imports by countries for the year 1909 (ending Oct. 1) and for the two preceding years:

Countries.	1907	1908	1909
United States	$3,093,192	$3,316,827	$4,271,046
France	604,574	552,460	644,315
United Kingdom	419,914	466,836	586,190
Germany	145,597	134,074	196,886
Other countries	188,454	230,963	182,239
Total	4,451,731	4,701,160	5,880,678

In the absence of any data showing imports by articles, it may be of interest to show the principal exports from the United States to Haiti from the report of the United States Bureau of Statistics, these exports representing for 1909, as shown in the table above, nearly 73 per cent of the total Haitien imports.

	1907–8	1908–9	1909–10
Cotton manufactures	$742,978	$1,248,197	$1,220,290
Wheat flour	962,012	829,019	957,539
Lard	273,537	240,801	304,663
Soap	249,102	265,028	303,400
Meat products	57,800	87,205	172,181
Pork, pickled	131,102	107,724	141,028
Tobacco	102,385	108,892	130,997
Lumber	65,413	65,334	111,630
Machinery	35,665	32,556	83,850
Oil, illuminating	76,075	70,931	79,492
Fish	43,705	38,336	44.254
Sugar	32,717	22,755	37,750

EXPORTS.

British Consul General A. Murray, of Port au Prince, in a report presented to Parliament in May, 1910, gives the total values of the Haitien export trade for the years 1907, 1908, and 1909 as $14,330,887, $17,399,240, and $11,008,483, respectively. The figures for the last year agree with the statement of United States Minister Furniss.

CUSTOMHOUSE, PORT AU PRINCE, HAITI.

There are no figures available of exports by countries, but the following table, compiled from reports of the minister of finance, shows the principal articles of export, by quantities, for the year 1909 and the two preceding years:

	1906-7	1907-8	1908-9
Beeswax .... pounds..	183,998	150,636	122,473
Cedar wood .... feet..	550,330	423,000	424,000
Cacao .... pounds..	4,839,737	5,889,504	4,613,361
Coffee .... do....	59,824,869	63,848,333	41,342,570
Logwood .... do....	114,458,880	89,119,982	76,585,810
Logwood roots .... do....	44,076,320	21,013,880	18,466,270
Cotton .... do....	4,501,578	3,389,823	3,615,972
Goatskins .... do....	289,370	291,166	327,890
Hides .... do....	283,328	140,780	160,685
Honey .... gallons..	451,428	125,616	641,435
Lignum-vitæ .... pounds..	9,393,960	5,595,017	8,632,294
Fustic (yellow dyewood)	444,000	387,580	216.500
Cottonseed .... pounds..	7,909,960	5,465,156	6,292,300
Orange skins .... do....	408,802	540,727	451,597
Copper .... do....	35,037	45,520	29,218
Coconuts .... do....	4,586	62,023	12,035

The following table, compiled from the reports of the United States Bureau of Statistics, gives for three years quantities and values of the principal articles of import into the United States from Haiti:

	1907-8		1908-9		1909-10	
	Weight.	Value.	Weight.	Value.	Weight.	Value.
Logwood .... tons..	13,010	$120,383	9,864	$68,160	19,022	$200,544
Cacao .... pounds..	744,535	110,531	1,079,194	90,715	570,660	47,577
Coffee .... do....	3,203,011	181,266	1,454,386	89,968	3,240,080	198,606
Cotton .... do....	633,159	75,943	381,049	40,496	851,002	134,118
Hides and skins	313,315	112,583	366,733	137,135	328,516	129,442
Lumber	....	48,733	....	70,127	....	50,527
Honey .... gallons..	8,843	2,870	9,093	3,229	10,901	3,969

PRODUCTS AND INDUSTRIES.

The industries of the country are mainly agricultural, the most important product being coffee of an excellent quality.

Cacao is also grown extensively, the annual output being estimated at 6,000,000 pounds. Cotton is exported in increasing quantities; of the grade grown in Haiti the fiber is not so long as that of the United States, although this is a condition that could be improved by proper seed selection and cultivation. Cheap lands and cheap labor make this branch of industry an attractive and remunerative one, and the several experimental plantations speak most optimistically of the future of this industry. Apiculture is another industry which had its inception on the island but a few years ago and has flourished to a notable degree.

The culture of pite (American agave) has been taken up. The cultivation of tobacco is extending, and the manufacture of cigars and cigarettes has been successfully engaged in.

The soil of the country is well suited for tobacco growing. Only a small quantity of this article is raised, however. One plantation, conducted on scientific principles, is producing tobacco of a fine grade.

The manufacture of shoes within the Republic has reached a point where the output is nearly sufficient to meet the needs of the home market, with the result that importations of foreign shoes have almost entirely ceased within the past eight years.

The mineral resources of the Republic, consisting of gold, silver, copper, iron, antimony, tin, sulphur, coal, kaolin, nickel, gypsum, and limestone, are as yet undeveloped. Remains of an ancient gold mine have recently been discovered near Ouanaminthe on the Dominican frontier and iron deposits are known to exist in the same locality, while at Fort Dauphin and in the Limonade district, respectively, deposits of copper and iron oxide have been discovered. Near Les Cahobas considerable outcroppings of soft coal are reported, and at Camp Perrin, some 7 leagues inland, there is a coal mine showing numerous rich veins. In the vicinity of Jacmel there are copper and silver deposits which have never been worked, and at Terreneuve, distant about four hours' travel from Gonaives, a copper mine is being worked by a syndicate of Haitians.

WEIGHING DYEWOOD AT GONAIVES.

There are numerous sugar plantations in the country, but no refineries. Rum and other spirits are distilled. Logwood is the most important of the many valuable woods shipped from the Republic.

LOGWOOD: The logwood tree furnished dyes to the Aztecs, and it held high place in the estimation of all European dyers from the date of its first introduction in Europe until the discovery of the analine products, since when logwood has found a rival in the chemically produced colorings.

The tree is native in the countries of the Caribbean, notably Honduras, Haiti, and Mexico, the finest quality coming from the shores of Campeachy Bay. This has led to its sometimes being called Campeachy wood.

Logwood carries the impressive botanical name *Hæmatoxylin-Campeachianum*, but is commonly known by the English designation, from the fact that the trees were imported in log form.

The tree has a crooked, deformed stem, and grows from 20 to 40 feet high, with crooked irregular branches armed with long thorns.

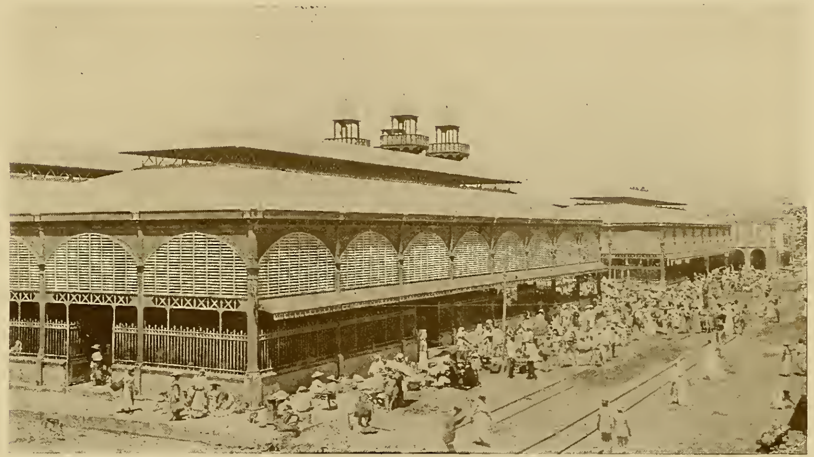
The leaves are pinnate; the flowers, small and yellowish, growing in long clusters at the extremities of the spinous branches.

The wood is of firm texture and red color; hence the name bloodwood, and so heavy as to sink in water.

The coloring principle of logwood is an organic substance in the timber which contains a chemical called hæmatoxylin, that can be liberated by fermentation.

In the preparation of the wood for use, the trees are cut down, the bark and softer part of the trunk removed and the heart cut into 3-foot long logs. It is afterwards hewn into much smaller pieces, and ground or rasped into chips.

There is great variation in the quality of logwood, and four well-marked varieties of the trees are recognized in Honduras with three in Jamaica, besides many intermediary species. Unfortunately, the woodsman who fells the trees has no guide whereby he may distinguish the desirable wood from the worthless.



AT THE MARKET, PORT AU PRINCE, HAITI.

The dye principle is only found in the inner growth of the heart of logwood, and the producer only discovers that one tree is replete with the product, while another contains none, after he has gone to the expense and labor of hewing the tree and clearing the heart of its outer layer of newer wood. The difficulty of distinguishing good from bad logwood chips has seriously handicapped the industry.

The chips are moistened with water and spread in thin layers until fermentation sets up whereby the hæmatoxylin is liberated. When exposed to the air and turned over repeatedly the chips gradually become coated with the brilliant metallic green crystals of the dye principle. Logwood dyes are largely used in calico prints and in coloring woolen goods. They are as a rule used in combination with other dyestuffs, in order to get the best results. Black, blue, purple, and green are the principal colors produced, with all intermediate shades. Logwood blacks are standards in print works.

"Mordanting" is the special chemical process by which logwood dyes are fixed, and this means they are combined with some substance, such as alum or copperas, which brings about a twofold attraction of the organic fibers and the coloring matter, serves as a bond of union, and thus "bites" in the color to the cloth.

The dye has been used in making ink, and to some extent powdered logwood finds a place among medical preparations. A decoction of logwood acts as a powerful astringent.

As already hinted the industry received a setback with the discovery of the analine dyes; however, as logwood still serves a very special purpose, it will continue to be exported in considerable quantities. The hazard of the business is great, but the rewards are commensurate, and if some sure way were found whereby it would be easy to tell the trees that contain the highest percentage of hæmatoxylin, it would be a long step on the road of economical production. Haiti offers attractive openings in the logwood business. The industry has been one of the mainstays of that Republic's commerce for years, and 100,000 feet will measure the annual output under favorable conditions. Logwood is another special gift from the New World to the Old, and although not ranking in importance with certain other forest productions, yet its peculiar uses stamp it as a resource of value in those countries where the tree is found.

RAILWAY STATION, PORT AU PRINCE, HAITI.

RAILWAYS AND INTERIOR WATERWAYS.

There are in Haiti about 98 kilometers (64 miles) of railway in operation. Concessions have been granted from time to time for projects which promised to open up the fertile districts of the Republic for exploitation, but until the latter part of 1910 little had been done to carry these plans into execution.

There is no regular system of railroads, but several short lines serving particular localities. A line is in operation at present running from Cape Haitien to Grand Riviere, a distance of 15 miles; another from Port au Prince to Lake Etang Saumatre, 28 miles, and the Port au Prince-Leoganes Railroad, 20 miles.

In August, 1910, the President of the Republic signed the contract with the Haitien National Railroad Co., which is building a railway which is to traverse almost the entire country from north to south, with several branches from the city of Gonaives in the northwest. According to Hon. Henry W. Furniss, United States minister, the main line will run from Port au Prince, passing along the coast, through Arcahaie, to St. Marc, 53 miles distant, then following up the great valley of the Artibonite River for about 115 miles, passing Varette, La Chapelle, Mirebalais, Las Coabas, and Hinche and from there running northward, passing Pignon, Savannette, Bahon, and Grand Riviere, to Cape Haitien, the principal northern seaport of Haiti, 205 miles distant.

There will be two branch roads. The longer branch will be from the seaport of Gonaives eastward to Hinche, 81 miles, where it joins the main line, having passed through Ennery, St. Michel, and Maissade. The other branch will be northward from Gonaives, passing Gros Morne, to Port de Paix, a northern coast city, about 35 miles distant. The entire system will cover an extent of about 321 miles. The contracts provide that the railroad shall have first-class modern equipment, which will be purchased in the United States. The gauge of the new line will be 42 inches, and a shipment of 60-pound rails has already been forwarded. The contractors reached the island early in 1911 and active construction work has progressed since their arrival.

The railroad will pass through large stretches of plateaus which, without cultivation, would make excellent grazing lands, the grass reaching to a height of more than 5 feet and in the dry season standing perfectly cured. It will also give an opportunity for the development of considerable mineral wealth in the shape of copper, iron, and coal (lignite), which occurs in large quantities adjacent to the railroad. The line will also pass through forests containing large quantities of logwood, cedar, mahogany, and other hardwoods, which heretofore it has been impossible to market, while immense stands of pine timber occur on the ridges of the mountains at the base of which the railroad will pass.

The Government has also granted to the same American syndicate a plantation concession, which has for its object the culture and exportation of bananas and other tropical fruits. Provision has also been made for the cultivation of sugar cane, cacao, rubber, etc.

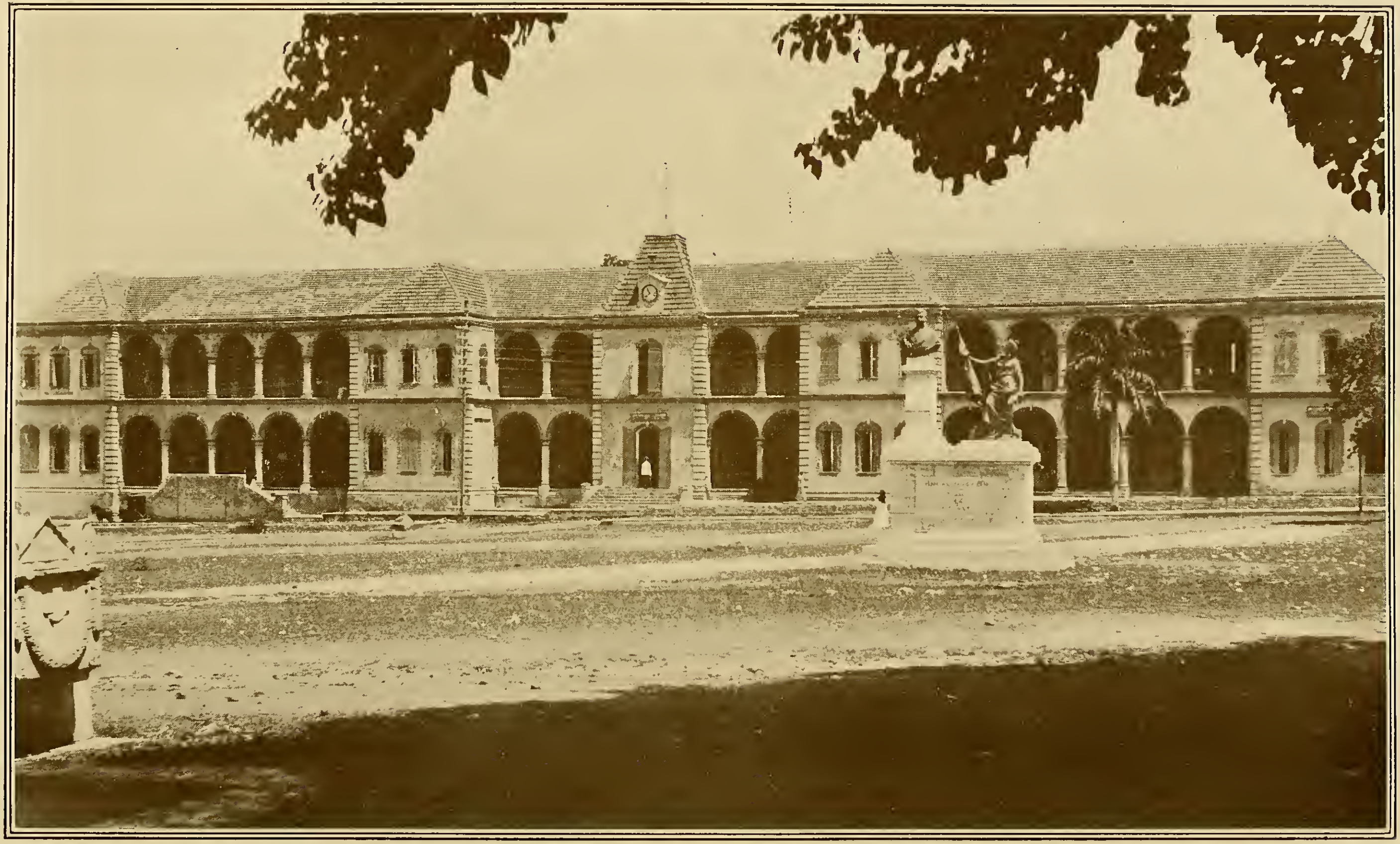
A concession has been granted for a new railroad from Leoganes to Aux Cayes, in the southern part of the Republic. The line will pass through Leoganes, Grand Goave, Petit Goave, Miragoane, Aquin, St. Louis, and Cavaillon, to Les Cayes, a distance of 160 kilometers (100 miles). Branch lines can be built to Port au Prince, Jacmel, Asile, Anse a Veau, Jeremie, and Port Salut.

Another concession has been granted and work is soon to be started on an electric line from Port au Prince to Petionville, through the towns of Lalue and Bourbon.

Among the numerous rivers of Haiti the Artibonite, the Trois Rivieres, and the Grande Anse are the most important. The Artibonite, the largest stream on the island, is navigable for some 100 miles. The other rivers, owing to their swift currents, are not navigable. Lake Etang Saumatre, 22 miles long and 60 miles wide, is the largest of the lakes and is navigable.

THE PRESS OF HAITI.

Before the foundation of the independent government a newspaper, the Gazette du Cap, had been established in the colony settled in Haiti, but the record is not clear as to what was the date of the first issue, or in fact the date of the erection of the printing press on the island called Santo Domingo, Hispaniola. Shortly after independence was proclaimed, the Gazette politique et commerciale d'Haiti made its first appearance on November 13, 1804, and contained as its chief reading material the decrees and ordinances of the Emperor Dessalines. Many other short-lived papers were issued between that date and 1820, most of them in Port au Prince, but in 1819 one periodical was founded in Aux Cayes. An official paper, the Télégraphe, with the first number on January 12, 1818, displaced many of them, and had a continuous existence of more than 40 years. About the same time another paper, the Feuille du Commerce-Petites Affiches et Annonces du Port-au-Prince, appeared and had a life of more than half a century. The list of newspapers published during the middle of the century is a long one, but to-day only one survives, Le Moniteur, now the



GOVERNMENT BUILDING, PORT AU PRINCE, HAITI.

In which are located the offices of the Departments of Foreign Relations, Public Instruction, Interior, Agriculture, Public Works, Justice, Finance, Commerce, and War and Navy.

official organ of the Republic of Haiti, but with the same name it was established in 1845, and is therefore in its 66th year. Papers have been issued from Cape Haitien, Jeremie, Jacmel, Port de Paix, and Gonaives. Since the opening of the cable (Port au Prince, Dec. 30, 1890) the latest news of the outside world has been regularly published.

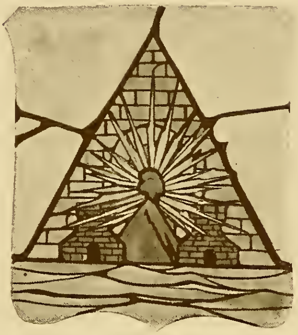
Port au Prince is the center of newspaper life in the Republic, and being the capital, practically all news of a political, social, and literary character circulates from there into the reading portions of the country. The newspapers of that city are small in size, resembling French rather than Spanish sheets as a rule. They measure on an average 13 by 20 inches, but Le Moniteur is still smaller. The unofficial dailies have only 4 pages of four columns each, but the Government paper ranges up to 8 and 12 pages, according to the amount of material for publication. Advertisements very rarely appear on the front page, that being reserved for cable and telegraphic news, and for leading articles on various subjects. The last page, on the other hand, is devoted entirely to advertisements. Illustrations, excepting as offered in the advertisements themselves, are absent. The rates for advertising matter are not given, and depend upon negotiation with the manager for arrangement in particular cases.

STATUE OF GENERAL DESSALINES, PORT-AU-PRINCE, HAITI.

HONDURAS

Honduras, the third largest of the Central American Republics, has an area of 46,250 square miles, with a population (1910) of 553,446, or 12 per square mile.

The territory of the Republic is mountainous throughout, and resembles that of Costa Rica, with a similar diversity of climate, soil, and products. Its large and fertile plateaus and valleys, among them the plain of Comayagua, 40 miles in length, produce nearly all the tropical crops and offer excellent pasturage for numerous herds of cattle. The forests contain several varieties of cabinet and other woods, of which mahogany is the most important. Bananas are the principal article of export, while coffee, coconuts, rubber, indigo, cattle, hides, precious metals, and other mineral products are shipped. Honduras is the country of the sarsaparilla, of which considerable quantities are annually exported to the United States.



COAT OF ARMS OF HONDURAS.

When Honduras seceded from the Central American federation, it adopted the unitary, republican form of government, the constitution expressly providing, however, that the said instrument shall not bar the Republic from again becoming a State of the federation, and that the constitution may at any time, for that purpose, be abolished or amended by Congress.

The usual division of the Government into legislative, executive, and judicial branches is retained. The Congress is composed of only one branch, called the Chamber of Deputies, consisting of 42 members, elected by direct vote for a term of four years at the rate of 1 deputy for every 10,000 inhabitants, the Chamber being renewed by halves every two years. An equal number of substitutes are elected at the same time as the deputies, to take their places whenever necessary. All citizens over 21 years of age, or over 18 years of age if married, and who can read and write, are not only entitled but are compelled to vote. Congress meets annually at the capital, Tegucigalpa, on the 1st day of January for a period of 60 days, which may be extended 40 days at its discretion or that of the President of the Republic. The latter may also convene Congress in extraordinary session. Three designados are elected by Congress to take the place of the President or vice president in case of their death or disability.

The President and vice president are elected by direct vote for a term of four years, and may not be reelected for the next consecutive term. The President is assisted by a cabinet of five ministers, who are appointed by him but responsible also to Congress. He receives an annual salary, with allowances, amounting to 42,000 pesos ($16,800). The Provisional President and cabinet are as follows:

Provisional President: Dr. Francisco Bertrand. (Inaugurated March 28, 1911.)

Minister of Foreign Relations, Government and Justice: Dr. Fausto Davila.

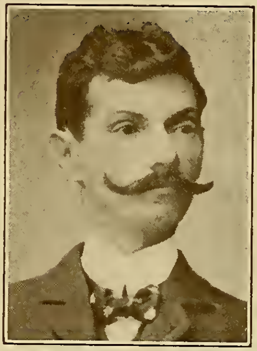
Minister of War: Gen. Rafael Lopez Gutierrez.

Minister of the Treasury and Public Credit: Sr. Santos Soto.

Minister of Fomento (Promotion), Public Works and Agriculture: Gen. Maximo B. Rosales.

Minister of Public Instruction: Sr. Jose Maria Ochoa Velasquez.

The Department of Foreign Relations, Government and Justice (Ministerio de Relaciones Exteriores, Gobernación y Justicia) has under its charge all matters pertaining to relations with foreign countries, through the diplomatic and consular corps, and the settlement of international boundaries. The various Departments and municipalities of the Republic are under its supervision, as are also the police forces and penal institutions, and all matters pertaining to the public health, all hospitals and asylums, and charitable institutions. The civil register, national statistical bureau and national archives are likewise under this department, as well as the National Printing Office and Bindery. It administers justice through the supreme court and minor courts, and regulates foreign and national corporations.



PRESIDENT FRANCISCO BERTRAND.

The Department of War (Ministerio de Guerra) is entrusted with the defense of the country, the training of the regular army and conscripts, and the care of the revenue cutter, coast, and lighthouse service. The military school at the capital and those at Amapala and San Pedro Sula are also under its jurisdiction.

The Department of the Treasury and Public Credit (Ministerio de Hacienda y Crédito Público) controls the administration of the national finances, the preparation of the annual budget, the service of the public debt, and the compilation of commerical statistics. It also has charge of the customhouses, internal revenue offices, the collection of taxes on alcohol, liquors, and gunpowder, and the register of real-estate titles, mortgages, and deeds.

The Department of Promotion, Public Works, and Agriculture (Ministerio de Fomento, Obras Públicas y Agricultura) is charged with the promotion of industries and agriculture, the development of the natural resources of the country, and the construction and preservation of public buildings, roads, and bridges. Through its numerous sections it has charge of post offices, the national telegraph and telephone lines, railways and waterways, roads and bridges, irrigation and water supply, agricultural matters, forests, mines and minerals, and the regulation and inspection of corporations and industrial establishments. The sale and distribution of public lands, colonization and immigration matters, agricultural schools and agronomic stations, the national industrial establishments; the electric-lighting plant at Tegucigalpa, and the national lithographic establishment are also under this department.

The Department of Public Instruction (Ministerio de Instrucción Pública) enforces the laws relating to public education, supervises the elementary public schools maintained by the municipalities, as well as the normal schools, national institute, and school of commerce, and has charge of the national library.

A PUBLIC PARK AT TEGUCIGALPA, THE CAPITAL OF HONDURAS.

The supreme court, the highest tribunal of justice in the country, is composed of five justices elected by popular vote for four years. The judges of municipal courts are appointed by the supreme court, while justices of the peace are elected by popular vote.

The standing army numbers about 2,000 and the reserve has 54,000 officers and men, military service being compulsory. There is no navy, but two small vessels of 12 and 108 tons burden serve as revenue cutters and do patrol duty on the coasts.

There are 264 post offices in the Republic, which handled a foreign business in 1910 amounting to 538,582 pieces, and of domestic, 542,365 pieces. The number of packages received by parcels post in the same year was 7,052. A parcels-post convention with Chile was celebrated on April 1, 1910. The Republic has like conventions also with the United States, Great Britain, France, and Mexico.

There are about 3,220 miles of telegraph lines, with 226 offices, 95 miles of new line having been built in 1910. The number of messages transmitted in the same year was nearly 885,000. The telephone companies operate 100 miles of line and 95 stations in the capital and other towns.

The Republic is divided politically into 17 Departments and 1 Territory, which are again divided into districts. The administration of each Department is in the hands of a governor appointed by the President. Municipal councils are elected by a direct vote of the people.

NEW BRIDGE CONNECTING TEGUCIGALPA AND COMEYAGUELA.

Virtually one city, although governed as separate municipalities. Bridge made of stone, costing 149,635 pesos, and called Puente Mallal.

HONDURAS IN 1910.

After a period of political unrest in the early part of the year, Gen. Miguel Dávila, who had been the constitutional President since 1908, resigned, and on March 28, 1911, was succeeded by the Provisional President, Dr. Francisco Bertrand. Gen. Dávila, up to the time of his resignation, had persisted in his policy of encouraging the development of the public-school system of the country, and had seen the foreign commerce enter upon a healthy increase over that of 1909. Dr. Bertrand took his office with the hope of advancing the constitutional interests and influences of the Republic.

Negotiations were conducted during the year with the Department of State of the United States for the conversion of the foreign debt of the nation, and early in 1911 a convention providing for that end was signed in Washington by the special commissioner from Honduras and Secretary of State Knox. The revenue and expenditure of the Republic were about equal. In February, 1910, the mint of Honduras was opened for the first time in two years, and silver and copper coins were produced to replace those that had disappeared from circulation.

Foreign commerce showed a gain, both imports and exports increasing above the figures for 1909, but the relative position was not changed, the imports being as before, greater than the exports. Corn, which occupies the first place among the agricultural products and meets the wants of the people, does not show in the exports. Unfortunately the system of cultivation is still in a primitive condition, but with the introduction of modern methods the people could produce in far greater abundance, for the soil of the country ought to make it one of the great corn-producing republics of America.

A separate department of the Government, with a member of the cabinet at its head, has charge of educational matters in the Republic. The primary schools in 1910 numbered 679, with 29,857 matriculants. Normal schools for both sexes, a law school, a national institute, and school of commerce are also maintained. The Government sends each year a number of scholars to the United States, Mexico, and Europe to gain proficiency in various professions. It has also subscribed to the establishment of the Pedagogical Institute of Central America in Costa Rica.

FINANCE.

In a message from President Miguel R. Dávila delivered to the National Congress on January 1, 1911, it is stated that the gross revenues for the fiscal year ending August 1, 1910, were 4,149,082 pesos silver, and that the expenditures of the Government for the same period were 3,803,433 pesos. These figures would show a surplus of 345,649 pesos, but that from the receipts the President deducts 482,181 pesos, costs of collecting revenue, thereby reducing receipts to 3,666,901 pesos. On this basis he states that there was a deficit of 136,532 pesos silver.

The official gazette publishes the receipts and expenditures from a somewhat different standpoint as follows:

Revenues, 1909–10.

	Pesos silver.
Customs duties	1,600,318
Liquor taxes	1,600,270
Powder taxes	31,076
Tobacco taxes	57,570
Stamped paper taxes	443,094
Cattle exportation	17,863
Produce exportation	112,896
Banana exportation	97,866
Public lands	5,913
Two per cent for pensions	6,079
Government Printing Office	6,777
Cable	35,294
Property registration	16,624
Sundry receipts	117,438
Total	4.149,078

Expenditures, 1909–10.

	Pesos silver.
Customs expenses	25,402
Liquor taxes	401,318
Powder taxes	22,112
Stamped paper taxes	27,760
Sundry expenses	3,984
Department of interior	612,161
Department of justice	140,981
Department of foreign affairs	149,735
Department of public instruction	200,378
Department of agriculture	34,267
Department of commerce	526,719
Department of war	1,492,893
Department of treasury	290,533
Total	3,992,623

From this statement it would appear that there was a surplus of 156,445 pesos silver.

DEBT.

In his message above referred to President Dávila gives the following as a statement of the internal debt:

	Pesos silver.
Debt on Aug. 1, 1909	4, 019, 252. 71
New obligations	396, 110. 50
	4, 415, 363. 21
Payments	361, 992. 74
Debt on Aug. 1, 1910	4, 053, 370. 47

The foreign debts of Honduras, of which the greater part is and has been in dispute, amounts to about £23,000,000 and is represented by the following obligations as shown by the Thirty-seventh Annual Report of the Council of the Corporation of Foreign Bondholders:

	Present amount.	
Five per cent loan of 1867	£78, 800	
Interest (Oct., 1872, to Oct., 1910)	149, 720	
		£228, 520
Ten per cent loan of 1867	900, 700	
Interest (July, 1872, to July, 1910)	3, 422, 660	
		4, 323, 360
Six and two-thirds per cent loan of 1869	2, 176, 570	
Interest (Mar., 1873, to Sept., 1910)	5, 441, 425	
		7, 617, 995
Ten per cent loan of 1870	2, 242, 500	
Interest (July, 1872, to July, 1910)	8, 521, 500	
		10, 764, 000
Total		£22,933,875

For a number of years efforts were made to arrive at some agreement between the foreign bondholders and the Government. These efforts resulted, until recently, in failure.

In 1903 and 1904 Dr. Ángel Ugarte was sent to London with power to arrange for a settlement. Dr. Ugarte's proposals were rejected by the foreign bondholders.

In February, 1908, President Dávila again opened negotiations with the foreign bondholders for a settlement. These negotiations, in one form or another, have been continued ever since.

Early in 1909 a proposition for settlement was submitted by the council of foreign bondholders and this proposition was approved in March by President Dávila. It failed, however, to secure the approval of the Government of the United States. The proposal submitted by Messrs. J. P. Morgan & Co., of New York, early in 1909, offering to purchase the debt, under certain conditions, was accepted by the bondholders and on August 5 of that year the bondholders' council issued a notice inviting deposit of bonds.

A convention was signed in Washington on January 10, 1911, by Secretary Knox on behalf of the United States and Sr. Don Juan E. Paredes on behalf of Honduras. This convention was signed ad referendum and has not yet been ratified. The final agreement will be between the Honduran Government and the banking company or its agents.

The proposal of Messrs. J. P. Morgan & Co., as published in Honduras, and stated to have the sanction of the Honduran Government, provides for the issue of a loan of $7,000,000 gold at 5 per cent, to be applied as follows:

To the foreign bondholders	$3, 000, 000
Reconstruction of the Puerto Cortez-Pimienta R. R	1, 300, 000

Bridge over Ulua River and construction of 83 miles railroad to Comayagua.	$1, 200, 000
Cancellation of internal debt	1, 500, 000
Total	7, 000, 000

The service of the debt will require an annual payment of 1,456,000 pesos silver to cover interest, 1 per cent of amortization and as other expenses of the loan.

The loan is to be secured by the custom revenues of Honduras.

FOREIGN COMMERCE.

The total foreign commerce for the fiscal year ending July 31, 1910, amounted to 13,978,241 pesos silver, of which 7,548,541 pesos was imports and 6,429,700 pesos exports. For the preceding year the figures were: Imports, 6,841,115 pesos; exports, 5,275,094 pesos; total, 12,116,209 pesos. This represents an increase for the year of 707,426 pesos in imports and 1,154,606 pesos in exports, or a total increase of 1,862,032 pesos silver.

AMAPALA, HONDURAS.

The most important shipping point on the south coast of Honduras.

The gold premium fluctuates but is here taken at 150, i. e., 2.50 pesos silver = $1 gold.

On this basis the foreign trade for the year in United States gold was: Imports, $3,019,416.40; exports, $2,571,916.00; total, $5,591,332.40.

IMPORTS.

The imports for the last three fiscal years by countries was:

Countries.	1907-8	1908-9	1909-10
United States	$1,878,941.65	$1,769,354.12	$2,059,522.24
United Kingdom	447,974.23	348,509.58	424,077.40
Germany	248,651.61	233,514.62	284,387.28
France	97,539.82	114,891.48	101,720.26
Central America	104,605.87	51,220.08	67,647.32
Spain	27,643.08	30,781.34	18,806.54
Belgium	3,531.30	6,891.09	17,498.88
Cuba	851.59	4,887.00	13,352.64
Italy	15,038.40	13,565.64	11,328.80
Mexico	1,119.28	3,249.76	9,927.68
Japan	....	562.81	3,672.48
Switzerland	1,051.15	124.00	2,458.40
Netherlands	308.62	24.00	1,349.60
China	1,176.25	3,707.55	1,137.88
Austria-Hungary	345.00	176.75	968.84
Other countries	1,205.99	1,393.21	1,560.16
Total	2,830,033.84	2,581,552.84	3,019,416.40

NOTE.—1908 and 1910 gold premium, 150; 1909 premium, 165. Comparisons therefore between the different columns can not be exact.

According to a special report forwarded to the Pan American Union by Sr. Don S. Vargas, director of the central office of accounts at Tegucigalpa, the following table shows the imports into Honduras, by countries, for 10 months from January to October, 1910, inclusive. The values are given in United States gold (premium, 150):

Imports January–October, 1910.

United States	$1,531,261.82	China	$1,027.08
United Kingdom	314,461.22	Netherlands	694.90
Germany	226,338.39	Portugal	488.36
France	83,421.41	Switzerland	308.47
Salvador	27,078.77	Sweden	208.78
Guatemala	16,316.09	India	159.54
Spain	14,607.44	Canada	154.78
Nicaragua	13,819.91	Costa Rica	152.57
Belgium	11,566.10	Cuba	120.00
Italy	9,518.41	Norway	104.04
Japan	7,507.19	All other countries	153.94
Mexico	3,004.30		
Austria-Hungary	2,845.25	Total	2,266,432.16
Denmark	1,113.40		

The report gives the value of the leading articles imported into Honduras during the first 10 months of the year 1910, as follows:

Imports January–October, 1910.

Textiles and manufactures:	
Printed cotton goods	$142,902.71
Cottons, bleached	138,208.76
Drills of cotton	136,979.76
Cotton underwear	50,498.78
Yarns and threads	35,529.38
Blankets of cotton	20,518.63
Handkerchiefs and towels of cotton	17,998.16

Textiles and manufactures—Continued.	
Cassimeres	$16, 536. 04
Knitted goods	15, 574. 75
Shirtings	12, 015. 53
Percales	12, 996. 18
Muslins	10, 296. 13
Laces	10, 195. 84
Other textiles not specially mentioned	12, 566. 94
Alimentary substances:	
Sugar	77, 510. 48
Rice	33, 091. 89
Meats and meat products	20, 097. 52
Liquors and brandies	20, 621. 37
Flour	14, 013. 98
Beer	12, 136. 76
Confectionery	11, 398. 71
Wine	10, 078. 39
Iron and steel:	
Wire and wire gauze	26, 424. 66
Agricultural implements	19, 873. 28
Tools	13, 578. 79
Iron and steel in bars and sheets	11, 699. 24
Paper:	
Cigarette paper	16, 284. 10
Writing paper	10, 107. 49
Machinery and implements:	
Sewing machines, etc., and accessories	38, 682. 91
Machinery for industrial purposes	18, 490. 58
Electrical machinery, etc	17, 900. 12
Miscellaneous:	
Medicines and pharmaceutical products	87, 645. 48
Shoes and boots	71, 658. 85
Dynamite	23, 169. 05
Candles	17, 086. 33
Petroleum	15, 528. 37
Furniture of wood and rattan	11, 175. 26

EXPORTS.

The exports for the last two fiscal years, by countries, were:

[Pesos, silver.]

Countries.	1908-9	1909-10
United States	4, 861, 599	5, 637, 528
Germany	190, 250	399, 752
United Kingdom	125, 553	125, 208
France	3, 783	8, 195
Spain	5, 250	9, 980
Mexico		2, 550
Cuba		2, 090
Belgium		1, 821
Central America	87, 957	241, 235
All other countries	702	1, 431
Total	5, 275, 094	6, 429, 790

The following table shows for the two last fiscal years values of the leading articles exported from Honduras:

[Pesos, silver.]

	1908–9	1909–10
Mineral products:		
Gold and silver cyanides	1, 423, 192	1, 800, 529
Gold	13, 425	84, 865
Gold and silver ore	25, 065	48, 295
Silver	51, 889	12, 143
Iron ore	2, 015	1, 016
Vegetable products:		
Bananas	2, 410, 193	2, 420, 070
Coconuts	300, 104	279, 564
Coffee	153, 634	159, 406
Rubber	93, 746	314, 365
Mahogany	88, 852	153, 947
Sarsaparilla	51, 392	65, 973
Cabinet woods	35, 072	10, 110
Cedar	23, 811	9, 405
Rice	2, 522	1, 368
Indigo	62	735
Animal products:		
Hides	139, 622	304, 204
Cattle	126, 263	279, 125
Deerskins	38, 126	54, 774
Alligator hides	1, 604	2, 976
Manufactured products:		
Cheese	6, 305	6, 695
Cigars	592	13, 573
Straw hats	4, 455	7, 054
Starch	106	333
Miscellaneous	283, 094	389, 265
Total	5, 275, 094	6, 429, 790

Sr. Vargas gives the exports from Honduras for 10 months from January to October, 1910, inclusive, as follows:

Exports January–October, 1910.

	Pesos, silver.		Pesos, silver.
United States	5, 549, 232. 49	France	8, 310. 00
Germany	413, 904. 43	Mexico	2, 550. 00
United Kingdom	133, 276. 65	Cuba	2, 090. 00
Salvador	186, 303. 22	Belgium	1, 821. 30
Gautemala	95, 748. 00	West Indies	180. 00
Nicaragua	34, 532. 00	Panama	167. 50
Costa Rica	21, 750. 00		
Peru	12, 000. 00	Total	6, 411, 865. 59

PRODUCTS AND INDUSTRIES.

The agricultural possibilities of the country are extensive. Cacao, cotton, sugar cane, coffee, tobacco, and other tropical and subtropical products can be grown in immense quantities and of the finest quality, while the forests supply abundant timber, pitch pine, and dyewoods, and the uplands furnish excellent pasture. On the lowlands on the Atlantic side banana culture is increasing, and in the more temperate climate offered by the tablelands in the interior, cereals, fruits, and vegetables of the more northern latitudes can be grown readily.

Maize takes first rank as to importance in the diet of the people, in which it figures largely on account of the comparatively small quantity of wheat produced in the Republic.

The growing of bananas for export is the industry of greatest importance. The increase in recent years in the consumption of bananas makes this a subject of wide interest. The exports of this fruit from Central America have trebled during the last

10 years, and constitute about 80 per cent of all the bananas imported into the United States. It is estimated that the Atlantic coast district alone produces 9,000,000 bunches of this fruit, of which the majority are exported. The banana in Honduras grows wild in practically all parts of the country up to an elevation of 3,000 feet or more, but the industry of cultivating this fruit for export is confined to the rich, hot lands along the north coast and not extending farther inland at any point than 50 or 75 miles. Puerto Cortez, Ceiba, and Trujillo are the main shipping points. The shipments from Puerto Cortez average about $1,000,000 in value a year.

Coffee is grown chiefly in the hill country at altitudes of from 1,500 to 3,000 feet.

There is reason to believe that with better means of communication and transportation facilities, Honduras, like Cuba, could become a great producer of sugar. Conditions of soil are ideal for the establishment of great sugar plantations, and by damming the mountain streams cheap power could be obtained to run the refineries.

IRRIGATION AT ZAMORANO, HONDURAS.

Irrigating the first modern sugar-cane plantation in the interior of Honduras.

Of great importance to Honduras is the recent attempt on the part of the Government to introduce proper methods in the cultivation of tobacco. The experiments which have been carried on are sufficient to prove the suitableness of soil and climate and the great possibilities in store for Honduras as a tobacco country. The factory at Danli has so far been quite successful.

Honduras is a country remarkably well suitable for cattle. About 500,000 head of cattle is a liberal estimate for the existing herds, but the fine pasturage in all parts could readily support many times that quantity. Exports to Cuba are regularly carried on, and recently a trial shipment was made to Panama. Better transportation facilities are, however, needed to develop the industry.

Honduras is a country rich in MINERAL WEALTH. It has one mine, the famous Rosario mine at San Juancito, not far from Tegucigalpa, the capital, which has been in continuous operation for the past 30 years, and up to the present has produced over $16,000,000 in gold and silver; there are also reserves in sight, valued at about $4,000,000. The milling plant is extensive and is equipped with the latest machinery for its purpose. Other paying mines are in the same neighborhood, with large bodies of good grade ore.

In the other Departments of the Republic mining is an industry conducted regularly, but on a smaller scale. Many of the mines contain gold, and not a few were worked in old Spanish times, when they had a reputation for being splendid producers. Silver is usually found with other metals, and this is in fact the chief metal in many mines, carrying sulphides, galena, and zinc blende. Copper and iron are known to exist in paying quantities, and lead, antimony, and mercury are reported, but although some deposits are worked, the great need of more economic means of transportation still prevents these valuable assets of the country from being commercially successful.

HAULING HEAVY MACHINERY TO THE SAN JUANCITO MINE, NEAR TEGUCIGALPA, HONDURAS.

There is a good cart road from San Lorenzo, on the Pacific side of Honduras, to the capital, Tegucigalpa, but from this point to the mine, about 20 miles, the company has constructed its own road. Over most of the highway automobiles have gone, but on the more mountainous road animal traction is still necessary. The heaviest machinery is, however, transported to the mouth of the mine, so that it is equipped with the most modern methods for all mining processes.

Besides the ore of the regular mines, immense quantities of ore sand have been found in the beds of such rivers as the Panal, Rosario, Almendares, España, and certain others which water the Department of Olancho. The methods used in treating the ores are most primitive, the washing being done with a sieve. But in spite of the primitive methods, the results are very satisfactory, since the women who are engaged in this industry obtain from 150,000 pesos to 250,000 pesos annually for their product. It is impossible to give an accurate estimate of the amount of free gold existing among the sands and rocks of the famous mineral zones of Olancho, Yoro, and Tegucigalpa.

An examination of the records show that some 700 mines in all have been denounced. While the country is undoubtedly richest in silver, denouncements have also been made of gold, lead, copper, kaolin, crystal, iron, opals, marble, saltpeter, aluminum, chalk, coal, antimony, zinc, nickel, and asphalt. Petroleum is also found, and an exclusive privilege to extract and export it has been granted.

The denouncement of a mining claim may be made by any individual to a zone to the extent of 1,000 hectares, which, six months afterwards, is measured and taxes paid upon it for the first year amounting to 50 cents silver per hectare. Free entry through the customs is granted for all needful equipment, freight destined for the mines being introduced by way of Amapala.

But another of the great sources of future wealth in the country will be found in the forests where MAHOGANY grows. The mahogany tree is timber king of the Tropics.

MAHOGANY LOG IN THE FOREST.

Always growing in splendid isolation, it rears its aureate branches crown-like above the surrounding arboreal growth. The fact that the mahogany forest or even the mahogany grove is nonexistent makes for the high market value of the wood. A mahogany lumber company that is sure of two trees to the acre, on the land it controls, will pay dividends if properly managed, but as an indication of the risks run in unexplored countries there is the experience of one corporation which had a mahogany cutting concession covering 40 square miles and the yield was exactly 60 trees, 3 of these hardwood trees found in each 2 square miles of territory.

True mahogany is the familiar dark-colored hardwood largely used for household furniture, supplied by a tree native in Mexico, Central America, Panama, Colombia, Venezuela, and the islands of the Caribbean Sea. In botany it is known as *Swietenia mahogani*, a designation combining an honor to Baron Van Swieten (court physician to Maria Theresa, Empress of Germany and mother of Marie Antoinette) with the original native name for the tree. The mahogany bears imparipinate leaves similar to those of the ash. It sometimes grows to the height of 100 feet, with a diameter measurement of 12 feet. Frequently trees are found that five men joining hands can not circle A decoction made from the bark was considered a remedy for fever, while the Aztecs used the seeds as one of the ingredients of a cosmetic. Its period of growth covers perhaps 200 years, which fact, in connection with the limited area where mahogany is found, makes difficult the compilation of accurate data descriptive of the botanical history of the tree.

The principal false mahoganies are African or Senegal (the true tree grows in Nigeria), Australian, (a eucalyptus), Ceylon mahogany, Indian (which is the toona tree in Bengal), Madeira mahogany (*Persea indica* or canary wood), bastard mahogany, and in the United States, California and mountain mahogany, which are all arboreals unrelated to the *Swietenia mahogani* already described.[1] Nearly all real mahogany grows north of the Equator in an area limited by the parallels 11° and 23° north latitude, which region of distribution encompasses the countries already mentioned. Small areas in Panama and recent sources of supply discovered in Africa lie without this zone, but few trees of this species have as yet been found below the Equator, which is curious in view of the fact that suitable climatic conditions exist in countries lying in corresponding latitudes south of the equatorial line.

BRINGING LOGS TO A CLEARING.

As the mahogany tree is indigenous to those lands of America where the dramatic episodes of early exploration were staged, it is natural that the first mention of the peculiar characteristics of the wood should be found in the history of the Cortez expedition. The Spaniards found it useful in shipbuilding, and for years this remained its principal application. A ship's carpenter who sailed with Sir Walter Raleigh in 1595 discovered the worth of the wood to English sailors, but it was not until the early part of the eighteenth century that mahogany was found to be well adapted for furni-

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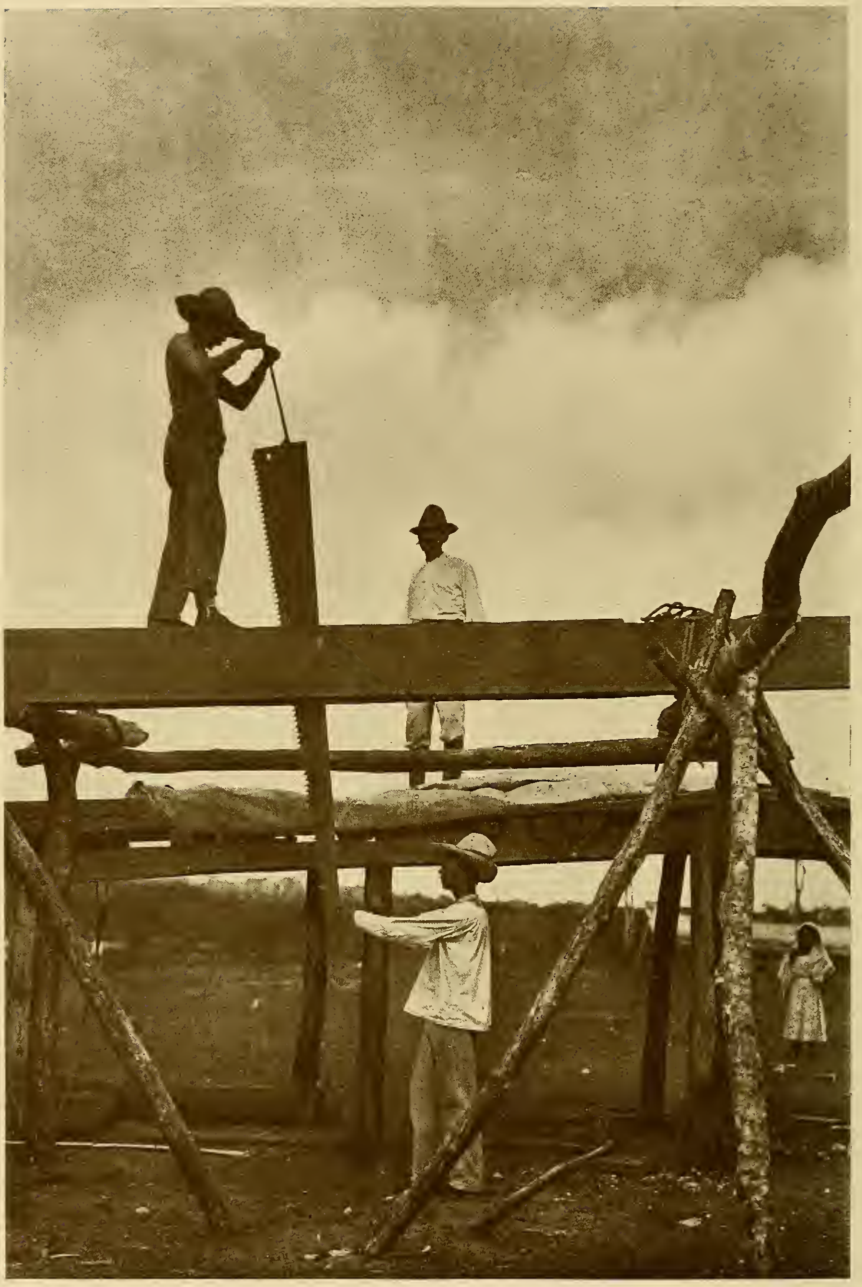
[1] A certain confusion exists because of the similarity of what is known as Colombian mahogany to the real wood. The Colombian variety is not mahogany at all but belongs to the monkey pod family, Lecythigaceæ and is technically known as *Cariniana pyriformis.* Colombian mahogany and true mahogany are botanically unlike as an oak and a maple, but a superficial resemblance in the grain and color of their woods accounts for the confusion of their designation.



SAWING THE MAHOGANY LOG INTO LUMBER.

If the local dealer in hardwoods thinks that the mahogany log is not fit for the foreign market, it is sawed by primitive methods, illustrated here, into boards as soon as it is brought out of the forest, and this lumber is used for the construction of houses on the spot, just as pine is used in the woods of Michigan or Canada. In such dwellings or on locally built vessels for navigation on contiguous waters in Latin America is the only place where mahogany as a wood can be found to-day. All that is seen in Europe or America is veneer.

ture. Previously it had been rejected as a building material. As late as 1850 this wood held its own in ship construction, but steam and steel having swept sails from the sea, it is too expensive to use save in some toy racing yachts and for fancy fittings on pleasure craft.

In histories and other writings dealing with the early days of the Spanish Main, the wood was mistaken for Spanish cedar, which appellation was the consequence of a mistake the first Spanish explorers made in calling the tree "cedrela," a confusion arising from the similarity of the two species.

Logging for mahogany is carried on to-day in the same primitive manner that served in collecting the wood in early days. In the main it is the process used in the forests of the United States and Canada with minor modifications because of special climatic conditions. Fortunately the trees are found near the coast, and if in the vicinity of a stream that will serve as a sluiceway, the cost of transportation is naturally lessened. It is the incidental labor and great difficulty of this first transportation that accounts for the big expense in marketing mahogany.

The trees are cut in the rainy season. A huntsman climbs to the highest limbs that will afford him a view of the roof of the forest. He marks down the mahogany by its conspicuous yellow-reddish leaves, then descends and leads the cutters through the jungle, hacking a road as they go, till the doomed tree is found; then saws and axes are plied, always at the time of the waning moon. The superstition that calls for the cutting of the trunk by the light of the waning moon is based on sound botanical grounds, for experience has shown that the mahogany tree is freer from sap, sounder, and of a richer color at that period. And the cool of the night offers the best time for the hard work, so the wisdom of the custom is apparent.

The hauling of the fallen trunk to a stream is the work of oxen still, and must be done in the dry season when the ground is hard. Once in the stream, a raft is made, and floating is carried on the same as in any logging country. At ship side the logs are immediately hoisted aboard to avoid the ravages of the boring toredo. London is the great mahogany market, which means that often the wood worked up by American manufacturers makes two trips across the Atlantic.

It is well known that the wood is noted for its hardness, durability, beautiful color, and grain, and in the diverseness of these qualities lies the value of the hewn trunk. It weighs 4¾ pounds a foot dry, board measurement. There are two main differences in grain pattern, the close-grained mahogany, the best of which comes from Cuba and Jamaica, and the wide-grained, also known as baywood, the mahogany of Honduras.

The uses of this hardwood are so varied that despite the high cost, mahogany is cheap. Musical instruments, furniture, and house fittings claim the great bulk of the wood, but the ease with which mahogany can be veneered makes for its most extensive use. Mahogany finished is a popular descriptive phrase that spells its constant application in this manner. When modern machinery can plane a mahogany board 1 inch thick into 200 sheets, the inlaying value of the wood is immediately seen.

It is to be regretted that much of the country formerly growing the precious trees has been deforested, but now that the principles of conservation have spread to all the Latin-American Republics, measures are being taken to protect the trees. Still, in Honduras thousands of acres exist where mahogany yet grows in its primitive isolation, a treasury that means much in future riches for this country.

RAILWAYS AND INTERIOR WATERWAYS.

In 1910 there were in operation 171 kilometers (106 miles) of railway in the Republic, the National Railway, owned by the Government, from Puerto Cortez to Pimienta, 90 kilometers (56 miles), being the most important. The Vaccaro System, in the banana territory at Ceiba, extends for 72 kilometers (45 miles), while the Dutuville Railroad Planting Co. has a banana line 5 miles in length extending from El Porvenir. Work is progressing on a number of other banana roads projecting from the Atlantic coast into the interior. The Vaccaro line was completed and put into operation to La Masica during the year. The company operating this road has also constructed a modern wharf at Ceiba, of creosoted wood, with a total length of 810 feet and a width of 34 feet.

The Government has devoted much attention in recent years to the transportation question, which involves the settlement of the foreign debt, the extension of the transcontinental railroad toward the Pacific side, and the building of some 71 miles of new line across the Republic to constitute the Honduras feeder to the Pan American road. Various concessions have been granted in the past two years for the construction of railways from the Atlantic coast, the most important of which was the contract for the construction of a line from Trujillo Bay to Juticalpa, with an extension to Tegucigalpa. As projected, the road will be 350 miles in length and will include branches to many interior cities. About 20 miles of line have been constructed, but work was suspended and a receiver has been appointed for the company.

GASOLINE MOTOR WAGON ON A ROAD IN HONDURAS.

Another line which, if completed, will open up a large extent of territory, is that projected from Iriona and Evans Lagoon to Juticalpa. This concession has been transferred to a company organized in the United States, but actual work on the road has not yet commenced.

Other railway contracts approved by the Government are the following: A standard-guage line, 80 kilometers (50 miles) in length, in the Department of Atlantida, from

Puerto Sal or Tela to the shores of the Comayagua River, for which surveys are being made. A wharf is to be constructed at Tela for use in connection with the railroad, and the line will run through the banana plantations in the northern zone of the Republic. Survey work has also been commenced on a line to run from Omoa, on the Bay of that name in the Department of Cortes, along the Cuyamel River and through the Chamelecon Valley for a distance of 61 kilometers (38 miles). The concession has been transferred to another company and it appears probable that the road will be built within a reasonable time. It will run through extensive pine forests and through large stands of mahogany, cedar, and other hardwoods, and will open up a large extent of virgin banana lands.

The construction of a railroad from the port of Nueva Armenia, located several mile to the east of Ceiba, and projected to tap the heart of the mahogany district, was commenced in the latter part of 1909, and 7 miles of line were put in readiness for the rails during 1910. The road will approximate 18 miles in length and pass for 10 miles through banana lands now producing.

According to Vice Consul J. H. Watts, of Puerto Cortez, work commenced June 27, 1910, on the new Zumurray Railroad, which is to run from Veracruz, some 25 miles west of Puerto Cortez, through the rich banana lands up to the Cuyamel plantation and on to the Guatemalan boundary. The line will be about 30 miles long and will pass through a region unsurpassed in fertility for the cultivation of fruits and cotton.

Of the numerous rivers of Honduras, the Chamelecon, Humuya or Comayagua, Ulua or Venta Lean, Aguan, Tinto, Patuca, Wanks or Segovia, Choluteca, Nacaome, and Goascoran are the most important, being more or less navigable, and some of them forming important means of communication and transportation.

A regular line of steamers plies on the Ulua River for a distance of 125 miles from its mouth to Progreso. The Agua Negro, Patuco, and Segovia are navigated by vessels of light draft for short distances.

The principal lake of Honduras is the Yojoa, which is 25 miles in length by 6 miles wide, and is navigable for steamers. It communicates with the Ulua River by means of its tributary, the Blanco River, thus giving water communication between the coast and the interior, the mouth of the Ulua River being not far from Honduras's principal port, Puerto Cortes.

THE PRESS OF HONDURAS.

As in the other Republics of Central America, the periodical press of Honduras was called into being by the decree in 1824 of Don Juan Mora Fernández, who at that time incited the people to read more, toward the end of better understanding the ambitions of their new country.

The first periodical published in Honduras was the Gaceta de Honduras, in June, 1830, in Comayagua, which was at that date one of the capitals of the country. The first daily newspaper was El Diario, issued from Tegucigalpa, in 1897, then finally decided by the Government to be the sole national capital. Considering the small population of the Republic, the isolated position of the principal cities, the difficulty of communication, and also the relatively inactive demand for contemporary literature of any kind, it is easy to understand that the periodical press has not kept pace with that in other parts of Latin America.

At present Tegucigalpa, La Ceiba, and San Pedro Sula are the principal places sustaining newspapers. The largest paper is about 15 by 22 inches, of only four pages, with six columns to a page. Others are smaller in size, but they retain the four-page form. On the first page there is but little advertising, as it is devoted almost altogether to news and general discussion, but the remaining three pages are well filled with advertisements, usually illustrated. The rates are based upon the column inch, and are from 5 cents gold each insertion or somewhat more, with special terms on contracts. The circulation varies from less than 1,000 to 5,000 at the most.

NICARAGUA

Nicaragua, the largest of the Central American Republics, extends over an area of 49,200 square miles, with a population (estimated 1910) of 600,000, or 12.2 per square mile.

Two mountain ranges traverse the entire country. Due to this fact it enjoys a diversity of climate, products, and soil. The fertile plateaus are extremely healthful and pleasant, while the lowlands are hot and tropical. Coffee, cabinet woods, caoutchouc, sugar, bananas, gold, silver, and hides are the principal articles of export, but tobacco, cotton, cacao, maize, and wheat are successfully grown. The precious metals and numerous other minerals are found in the mountains, and the vast forests contain mahogany and other valuable cabinet woods, besides over 40 different species of trees furnishing oils and extracts used for industrial and medicinal purposes. The Indians inhabiting the Mosquito coast are noted for their unique industries, such as the manufacture of gold chains, hammocks, straw hats, and pottery, all of which find a ready market.

COAT OF ARMS OF NICARAGUA.

Under the constitution promulgated March 30, 1905, the legislative power was vested in a National Assembly composed of one chamber, the members of which were elected by popular vote for a term of six years, one for each electoral district of 10,000 inhabitants or fraction above 5,000, the chamber being partially renewed every two years. Every citizen over 18 years of age was not only entitled but obliged to vote. The Congress meets at Managua, the capital, once in two years, on September 1, for a period of 90 days. At the present time, however, the Republic is governed under a provisional law, issued September 15, 1910, by Sr. Juan J. Estrada, then Provisional President, until such time as a constitutional convention can be held to provide for a new constitution. Under this provisional law the executive as well as the legislative functions are exercised by the Provisional President and his cabinet.

The Provisional President is assisted by a cabinet of five ministers, as follows:

Provisional President: Sr. Adolfo Díaz (inaugurated May 11, 1911).

Minister of Foreign Relations and Public Instruction: Sr. Tómas Martínez.

Minister of Government, Justice, Police, and Charities: Sr. Joaquín Gómez.

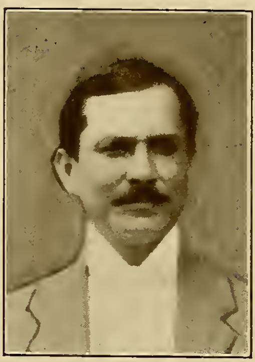
Minister of War and Navy: Gen. Luis Mena.

Minister of the Treasury and Public Credit: Sr. J. R. Sandino.

Minister of Fomento (Promotion) and Public Works: Sr. Alejandro Cantón.

The Department of Foreign Relations and Public Instruction (Ministerio de Relaciones Exteriores y Instrucción Pública) is intrusted with the maintenance of cordial relations with foreign nations, the settlement of international boundary disputes, and all matters usually pertaining to foreign affairs. It has also control of all the public schools, both elementary and secondary, and special schools such as the schools of law at Managua, Granada, and Leon, the School of Medicine at Leon, and a commercial college maintained by the Government.

The Department of Government, Justice, Police, and Charities (Ministerio de Gobierno, Justícia, Policía y Beneficencia) has jurisdiction of the governors of departments, districts, and comarcas, and the governing boards of muncipalities are also subject to its supervision. All general elections, the preservation of public order, the regulation and distribution of lands for native Indians, and the preparation and compilation of vital statistics are under its charge. The administration of justice, the penal institutions, the police forces of the country, the public and private hospitals, charitable institutions and asylums, are intrusted to it, as well as the maintenance of public order and the control of the national lottery.



PRESIDENT ADOLFO DIAZ.

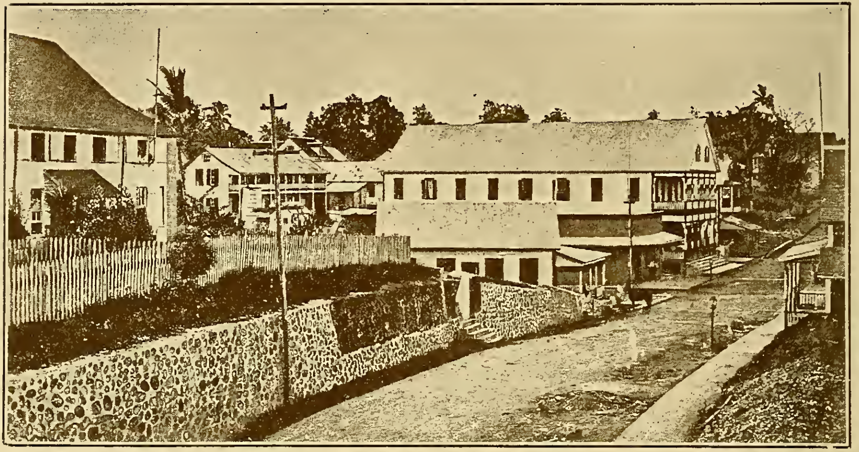
The Department of War and Navy (Ministerio de Guerra y Marina) is intrusted with the national defense and the recruiting and instruction of the military and naval forces. It has charge of the military school at Tegucigalpa, and also of the revenue-cutter service.

The Department of the Treasury and Public Credit (Ministerio de Hacienda y Crédito Público) collects all duties and taxes disburses, the public funds, prepares the annual budget, compiles commercial statistics, has charge of the service of the public debt, supervises the manufacture of alcohol and liquors and the manufacture and sale of tobacco, and collects the revenues from such articles. The court of accounts, which is empowered to audit and investigate the accounts of the various departments, is likewise attached to this department.

The Department of Promotion and Public Works (Ministerio de Fomento and Obras Públicas) promotes and regulates the commerce and industries of the Republic. Its principal divisions are: Agriculture and stock raising; exploitation of forests; public lands; mines and minerals; commerce and industries; the national museum; post offices; national telegraphs and telephones; railways, navigation; roads and bridges, and public works.

According to the new provisional law, the judiciary is constituted as follows: A supreme court of justice, with seat at Managua; three courts of appeals, in Leon, Granada, and Bluefields, and several district and local courts.

The active army consists of about 4,000 men, and the reserve of about 36,000 additional, military service for at least one year being compulsory. The navy consists of eight small steamboats carrying guns, whose chief function has been the prevention of smuggling.



COMMERCIAL STREET, BLUEFIELDS, NICARAGUA.

Bluefields occupies a height overlooking the capacious landlocked harbor at the mouth of the Rama River, which empties into the Caribbean Sea. Large quantities of bananas are grown in the vicinity and shipped to New Orleans. Bluefields is also the center of a considerable mining industry.

There are about 135 post offices in the Republic, many of which are also money-order offices. The number of telegraph offices is 130, with 3,637 miles of wire; the length of the telephone lines is 805 miles, with 29 stations.

The Republic is divided into 13 Departments, 3 districts, and 2 comarcas, which are again subdivided into municipalities. The governors of the departments, districts, and comarcas are appointed by the President.

NICARAGUA IN 1910.

The political disturbances which began in the Republic during 1909 continued in the first half of the year, with the gradually increasing power of the revolutionary forces on the east coast. The party by whose hands these forces were controlled finally obtained the mastery over the country and occupied the capital, Managua, early in the second half of the year, and the leader of that party, Gen. Juan J. Estrada, became provisional president of the Republic on August 28. He immediately appointed a cabinet and formal steps were taken to place the Government on a footing of constitutional activity. Election decrees were issued in November and a constitutional convention was held on December 31. President Estrada assumed office thereupon, January 1, 1911. The United States had meanwhile sent a special diplomatic representative to Managua, and relations with that Government were restored, recognition of the constitutional president being one of the first steps in the year 1911. Negotiations for a foreign loan, secured by proper Nicaraguan sources of revenue, were under way at the close of the year. The foreign and the domestic debt together do not make a very large total, and with peace established the proposals of Nicaragua are worthy of serious consideration. Financially, the charges against the foreign debt were faithfully met, although there was a deficit at the end of the year, the revenue being insufficient to meet the ordinary expenditure, but this is to some extent accounted for by the extraordinary sums necessitated by the revolution. Industrially, the country advanced over the condition of 1909, for the quiet brought about by the cessation of internal disorder allowed the proper harvesting of crops and a return to industrial activity.

THE RAILWAY STATION, GRANADA, NICARAGUA.

Granada is at present the end of the line that begins at Corinto. Steamers cross the lake from here. The city is commercially of great importance.

FINANCE.

According to a special report prepared on July 1, 1911, for the Pan American Union by Sr. Don J. R. Sandino, minister of finance, the total receipts for the year 1910 amounted to 15,182,852 pesos, paper, and the ordinary expenditures to 12,052,848.13 pesos. There were extraordinary expenditures on account of the revolution of 1909 amounting to 22,520,277.83 pesos, which, added to the ordinary expenditures above, give a total of 34,573,125.96 pesos, and shows a deficit of 19,390,273.96 pesos.

These figures are converted by Sr. Sandino into United States gold on a basis of gold premium of 900, showing receipts, $1,518,285.20; ordinary expenditures, $1,205,284,81; extraordinary expenditures, $2,252,027.78; total, $3,457,312.59 deficit, $1,939,027.39.

HOTEL DE CORINTO, NICARAGUA.

The building is close to the water of the bay, the entrance to the steamer pier, and is across the street from the customhouse. The lounging room inside the main entrance is practically the "club" of the port.

The following table shows the receipts for 1910 as derived from the different sources:

	Pesos paper.
Customs duties	9, 793, 717. 35
Liquor taxes	1, 427, 094. 55
Tobacco taxes	1, 319, 024. 79
Slaughter taxes	706, 081. 42
Property registry fees	49, 330. 46
Stamped paper taxes	145, 040. 78
Minor taxes	75, 584. 00
Railroads	324, 999. 94
Steamer service	6, 959. 02
Post offices	160, 135. 61
Telegraphs and telephones	67, 063. 92
Laws and official papers	644. 50
Monopolies	65, 786. 31
Waste lands	15, 367. 21
Confiscations	3, 251. 90
Fines	74, 065. 49

	Pesos paper.
Military taxes	3, 215. 00
Road taxes	1, 400. 50
Legalization of documents	481. 00
Various revenues	943, 605. 25
Total	15, 182, 852. 00

The following table shows the ordinary expenditures for the year 1910 in the different departments:

Department of—	Pesos paper.
Interior	1, 048, 372. 61
Police	1, 838, 468. 68
Beneficence	79, 043. 05
War and navy	2, 107, 122. 01
Finance and public credit	3, 939, 781. 19
Fomento and public works	1, 458, 195. 24
Justice	642, 530. 47
Foreign relations	525, 707. 94
Public instruction	413, 626. 94
Total	12, 052, 848. 13

PUBLIC DEBT.

The total debt according to the special report of Sr. Sandino was, on December 31, 1910, as follows:

Foreign debt.

6 per cent sterling loan of 1909 (Ethelburga syndicate loan—authorized amount £1,250,000) amount outstanding £916,285, converted at $4.86	$4, 453, 145
Nicaragua Fruit Co. debt	50, 000
José Aramburu debt	5, 000
Treasury warrants, outstanding accounts, etc	120, 240
Total foreign debt (gold)	4, 628, 385

Interior debt.

Paper money in circulation	30, 902, 604
Bonds of public credit	7, 759, 511
Interior loans	1, 337, 138
Obligations, etc	11, 080, 059
Total interior debt (pesos paper)	51, 079, 313

On the basis of gold premium at 900, the interior debt would amount to $5,107,931 and the total obligations to $9,736,316 gold.

Refunding the debt and placing the country upon a sound financial basis has been one of the principal objects sought by the administration of President Estrada.

On May 6, 1911, the National Assembly enacted a law authorizing the administration to enter into negotiations with bankers in the United States through the good offices of the United States Government for the placing of a loan up to $20,000,000, American gold, upon the most advantageous and equitable conditions.

By the same law the administration is authorized to enter into such conventions as may be necessary to put into effect the proposed negotiations, such conventions to be subject to the ratification by the National Assembly. This law was approved by President Estrada on May 7, 1911.

The good offices of the United States were solicited and on June 6, 1911, a convention was signed in Washington by the Hon. Philander Knox, Secretary of State, representing the United States, and Sr. Dr. Don Salvador Castrillo, the Minister of Nicaragua, representing that country.

This convention was ratified by the National Assembly on June 15, 1911, and is now pending in the Senate of the United States. There has been no official publication of the treaty, but it is understood to be similar to the Honduran treaty. The transaction, however, differs in at least one important point. The Honduran agreement, covering amount of loan, rate of issue, and interest, was directly between the Republic of Honduras and the syndicate of New York bankers, while in the Nicaraguan loan the bond issue will be on a competitive basis, the bonds being sold to those offering the most advantageous terms.

RIVER SCENE NEAR LA LUZ, NICARAGUA.

The principal rivers of Nicaragua are the Segovia or Wanks, which rises in the Central Mountains, and the San Juan, which flows from Lake Nicaragua. Both empty into the Caribbean Sea and are navigable for considerable distances.

The amount of the loan will probably be between 10 and 15 million dollars, to be determined after a final report of the mixed commission examining into the validity of the Nicaraguan obligations.

FOREIGN COMMERCE.

For several years only fragmentary statistics and estimates of the foreign commerce of Nicaragua have been published. The special report prepared for the Pan American Union by Sr. Sandino, minister of finance, gives the latest data available, which is for the year 1909.

The figures for the years 1905, 1906, 1907, and 1908 are now available from the report, dated December, 1909, published in 1910, of Sr. Castellon, then minister of finance. The figures given in Sr. Castellon's report include no details of imports by articles or classes.

The total foreign trade of Nicaragua for the year 1909 amounted to $6,572,685.25 gold. The imports were $2,583,257.25 and the exports $3,989,428 (gold premium

900). In 1908 the imports were $2,958,878.71 and the exports $3,647,984.17 (gold premium 600) or a total of $6,606,862.88. Due to the different gold premium an exact comparison of the totals for the two years is not practical.

IMPORTS.

The value of imports by countries for the years, 1907, 1908, and 1909 were:

Countries.	1907	1908	1909
United States	$1,611,718	$1,434,647	$1,341,692
United Kingdom	806,521	826,467	625,668
Germany	421,427	324,774	286,408
France	143,464	154,455	131,826
Italy	57,444	52,507	109,307
Spain			28,462
Guatemala	16,099	13,263	330
Honduras			3,567
Costa Rica			1,626
Salvador			7,820
Other European countries	166,343	148,687	43,316
Other American countries	1,155	4,078	3,235
Total (gold)	3,224,173	2,958,878	2,583,257

The following table shows the imports in 1909 by articles:

Textiles and manufactures.

Prints	$126,873
Domestics:	
Plain	71,247
Striped	4,268
Irish linen	66,817
White hollands	43,986
Sheeting	5,322
Drills:	
Unbleached	47,211
All others	56,833
Ginghams:	
Common	43,398
Light	8,837
Fancy dress goods	32,128
Batistes	20,462
Cassimeres	19,004
Sateen and satinet	12,425
Canvas	10,386
Corduroys	10,374
Muslins and gauze prints	3,082
Flannels	2,867
Taffeta and serge	2,653
Piqués	1,921
Clothing, ready made:	
Drill	10,606
Cotton	3,448
Shirts and undershirts	18,715
White shirts	12,166
Ponchos and blankets	14,520
Cotton blankets	5,847
Muffles and shawls	7,376
Mantles and mantillas	4,649
Towels and bathing robes	2,668
Table and other covers	1,956
Counterpanes	1,943
Knitted goods	21,258
Handkerchiefs, etc	7,885
Collars, cuffs, shirt fronts	4,168
Ribbons and braids	10,465
Belts and belt ribbons	$1,683
Common laces	27,337
Fine laces	3,701
Lace curtains	2,810
Veils	5,716
Neckties	4,077
Embroideries	4,463
Passementeries	2,508
Thread	38,055
Shoe laces	6,331
Cordage	5,741
Yarn, raw or bleached	3,962
Silk thread	2,774
Hemp bags	43,223
Sacking	3,943

Alimentary substances.

Smoked meat	$7,765
Other meats	6,812
Sausages	2,316
Sardines	5,663
All other fish	4,112
Wheat flour	217,252
Rice and oats	62,543
Corn	5,441
Corn meal	2,792
Ship biscuits and soda crackers	2,596
Noodles and macaroni	2,017
Beans	28,326
Olives and capers	5,723
Fruits and vegetables	5,690
Fruit, dried	2,566
Potatoes	2,594
Beer	14,728
Wines	14,022
Mineral water	7,059
Cognac and similar	6,190
Champagne	3,961
Whisky	3,597
Cider and ginger ale	2,792
Fruit essences	2,151

Lard	$17,595
Butter	8,002
Cheese	3,015
Coconut oil	5,014
Olive oil	3,090
Confitures and sweets	3,693
Cinnamon	2,212
All other spices	3,176

Iron and steel.

Iron in sheets	$11,106
Iron in bars	9,158
Iron and steel:	
Ingots	2,625
Rails	6,400
Tubes	6,545
Barbed wire	18,213
Nails, wire and cut	4,295
Chains	1,767
Enameled goods	6,246
Stoves	2,691
Bedsteads	2,128
Machetes	14,648
Agricultural implements	4,280
Tools	2,095

Instruments, machinery.

Sewing machines	$8,244
Pianos	5,163
Typewriters	3,286
Phonographs	2,385
Mining implements and machines	34,928
Printing machinery	4,927
All other machinery	87,978
Water pumps	4,337
Boilers	1,573
Vessels	5,785

Chemicals, drugs, etc.

Cyanides	$20,094
Rosin oil	12,595
Potash and caustic soda	6,211
Dynamite	5,470
Whiting	4,071
Carbonates and carburates	2,934
Oxides and salts	2,834
Quicksilver	2,714
Carbolinum	2,687
Sulphate of quinine	2,418
Varnish	1,963
Paints:	
In oil	8,825
In powder	2,259
Patent medicines	16,310
Tonics	3,332
Emulsions	3,135
Other pharmaceutical products	15,942
Toilet water	$6,094
Face powder	3,071
Perfumes	9,069

Paper and manufactures.

Writing paper	$11,245
Printing paper	8,103
Wrapping paper	3,637
Cigarette paper	2,863
Books and newspapers	4,565
Copybooks and blank books	2,455

Animals and animal products.

Live animals	$1,972
Calfskins	44,284
Sheepskins	2,655
Workmen's shoes	6,772
All other shoes	15,036
Tallow	20,720
Candles	15,571
Common soap	10,446
Fine soap	4,794
Stearin, raw	2,259

Wood and vegetable products.

Lumber	$11,184
Carriages and gears	3,171
Carts and trucks	1,879
Furniture	8,098
Trunks and chests	5,934
Barrels and similar	2,341
Caoutchouc, unmanufactured	2,691
Leaf tobacco	4,443
Tobacco, manufactured	12,296

Earth, stones, and manufactures of.

Alabaster, marble, etc	$13,139
Cement	8,107
Coal	5,565
Refined mineral oil	53,033
Lubricating oil	10,158
Crude mineral oil	8,420
Gasoline and benzine	8,242
Crystal and glass ware	4,240
Lamps and globes	3,115
Bottles and demijohns	2,527
Porcelain ware	4,945

Miscellaneous.

Straw hats	$15,593
Hats, untrimmed	9,904
Combs	10,050
Matches	9,165
Umbrellas and parasols	2,964
Gold and silver coin	47,332
All others not mentioned	416,882
Total	2,583,257

Of the articles above mentioned came—Prints: From the United States $71,069, United Kingdom $43,184, and Spain $9,490. Unbleached domestics, plain: From United Kingdom $43,663, United States $22,693, and France $2,823. Irish linen: From United Kingdom $52,952, United States $9,825, Germany $1,933, and France $1,334. White hollands: From United Kingdom $35,090, United States $5,199, France $1,870, and Spain $1,043. Drills, unbleached or colored: From United States $39,874 and United Kingdom $6,736. All other drills: From Italy $22,347, United States $21,896, United Kingdom $7,494 and Germany $2,053. Ginghams, common: From United Kingdom $35,563, United States $3,599, Italy $1,892, France $1,097, and Germany $986. Fancy dress goods: From United Kingdom $25,996 and United

States $4,251. Batistes: From United Kingdom $19,380. Cassimeres: From France $9,621, United Kingdom $4,118, Italy $3,522, and Germany $1,744. Sateen and satinets: From United Kingdom $10,776 and Germany $1,384. Canvas: From United Kingdom $7,855 and United States $2,461. Corduroys: From United Kingdom $6,921, Germany $1,387, and Italy $1,197. Shirts and undershirts: From United States $8,175, Germany $3,711, and Italy $2,438. White shirts: From United States $6,600 and Italy $1,237. Ponchos and blankets: From United Kingdom $12,811. Knitted goods: From Germany $14,016 and United States $2,467. Ribbons and braids: From France $5,379 and Germany $3,655. Laces: From United Kingdom $22,560, Germany $4,306, and France $3,611. Threads: From United Kingdom $32,875, United States $2,172, and Germany $1,574. Hemp bags: From United Kingdom $27,895, Germany $7,453, France $1,549, and United States $1,057.

Of alimentary substances came—Wheat flour from the United States exclusively. Rice and oats: From United States $29,962, United Kingdom $21,127, Germany $3,153, and Salvador $7,286. Beans: Practically all from United States. Beer: From Germany $7,316, United States $5,930, and United Kingdom $1,324. Wines: From France $5,243, Italy $4,188, Germany $2,293, and Spain $1,315. Lard: From the United States exclusively.

Of iron and steel and manufactures came—Iron and steel in sheets: From United Kingdom $6,922 and United States $4,072. Barbed wire: From United States alone. Machetes: From United Kingdom $7,070, United States $4,412, and Germany $3,004.

Of instruments and machinery, etc., came—Mining implements and machinery: From United States $23,671 and United Kingdom $10,783. All other machinery not specially mentioned: From United States $73,312, United Kingdom $9,606, and Germany $5,893.

Of chemicals, drugs, etc., came—Cyanid: From United States $15,895 and United Kingdom $3,804. Rosin oil: From Italy $4,141, United States $3,903, Germany $3,303, and United Kingdom $1,248. Patent medicines: From United States $7,394, Germany $4,809, and France $3,856.

Of paper and manufactures came—Writing paper: From Germany $4,437, United States $2,489, and France $1,429.

Of animals and animal products came—Calfskins: From United States $35,747, Germany $6,313, and France $1,920. Shoes: Practically all from United States. Tallow: All from United States. Candles: From United States $4,312, Germany $1,555, and United Kingdom $1,249. Soap: From United States $8,312, United Kingdom $5,114, and Germany $1,259. Lumber: Almost exclusively from United States. Tobacco, leaf and manufactured tobacco: The bulk from the United States.

Of earths, stones, and manufactures came—Refined and crude mineral oil and lubricating oil: Practically all from United States. Hats, untrimmed, and straw hats: The bulk from Italy. Combs: From France $5,211, United States $2,242, and Germany $1,827.

EXPORTS.

The value of exports, by countries, for the years 1907, 1908, and 1909 were:

Countries.	1907	1908	1909
United States	$1,566,884	$1,594,567	$1,677,010
United Kingdom	403,666	502,814	843,453
France	478,030	567,086	776,429
Germany	513,102	641,633	423,579
Italy	....	....	44,190
Spain	....	....	1,857
Other European countries	78,324	76,145	55,374
Guatemala	....	....	1,430
Salvador	....	....	39,395
Honduras	299,581	227,871	84,167
Costa Rica	....	....	19,281
All other countries	23,933	37,864	23,263
Total (gold)	3,363,522	3,647,984	3,989,428

The figures for 1907 and 1908 in the table above and in the following table, taken from Sr. Castellon's report, are given in gold, calculated on a premium of 600. The figures for 1909, from Sr. Sandino's report, are calculated on the basis of a gold premium of 900. The increase for 1909 is, therefore, probably much greater than indicated by the totals.

The following table shows the exports, by articles, for the years 1907, 1908, and 1909:

	1907	1908	1909
Vegetable products:			
Coffee	$1,317,732	$1,525,732	$1,546,919
Wood	221,225	202,538	415,575
Rubber	315,107	188,712	229,871
Sugar	570	87,373	182,123
Bananas	83,251	267,541	163,828
Cotton	2,336	26,838	36,529
Mora extract	7,000	21,507	17,500
Cacao	11,621	10,914	15,096
Corn	167	1,674	3,066
All others	13,021	10,800	....
Animal products:			
Hides	98,645	75,455	146,253
Deerskins	36,752	41,139	42,196
Lard	....	....	18,264
Cheese	68,016	8,300	14,967
All others (mainly live cattle)	206,440	170,131	....
Mineral products:			
Gold in bars, dust, and amalgam	746,092	777,137	855,026
Gold concentrated and precipitated	136,977	126,695	182,866
Silver coin	112,111	64,386	80,978
All others	6,712	30,763	....
Miscellaneous	9,749	9,749	38,371
Total	3,363,522	3,647,984	3,989,428

For 1907 coffee was exported to France to the value of $748,309, Germany $400,257, United Kingdom $247,658, United States $76,059, and Italy $35,226. Wood found practically its only markets in the United States and United Kingdom, which bought of Brazil wood: United Kingdom $1,209. Mahogany: United States $71,416 and United Kingdom $31,049. Cedar: United Kingdom $129,148. Guayacan wood: United States $5,092 and United Kingdom $2,520. Jenizaro wood: United States $19,042. Mora wood: United Kingdom $89,600. Niambar wood: United States $22,943 and United Kingdom $12,720. Caoutchouc was taken practically all by the United States. Sugar was exported to United Kingdom $73,545, United States $54,446, and Honduras $39,162. Cotton: Practically all to United Kingdom. Mora extract: Germany $6,875, Italy $8,025, United Kingdom $1,250, and Spain $1,250. Cacao: Salvador $4,898, United States $3,862, Germany $2,887, United Kingdom $1,567, and Guatemala $1,322.

Hides and deerskins went in the bulk to the United States; lard and cheese to Honduras, Salvador, and Costa Rica.

Of the mineral products, all the gold amalgam went to the United States, gold in bars and dust to United States $669,242, United Kingdom $88,157, and France $6,600. Gold precipitates: United Kingdom $50,758 and United States $17,532; and, finally, mineral concentrates, all to the United Kingdom, to the value of $68,264.

PRODUCTS AND INDUSTRIES.

The agricultural, timber, and mining industries are the principal sources of national wealth. The area under cultivation has increased in recent years, the chief product being coffee. Nicaraguan coffee is of superior quality and commands good prices, the finest plantations lying in the northwestern districts. In Matagalpa and Jinotega the crops are worked by colonies of Americans and Germans, who apply the natural water power of the country to the operation of such machinery as is required. The coffee yield for 1908–9 was about 14,200,000 pounds; the crop for 1909–10 is estimated at 22,300,000 pounds.

Sugar growing is profitably conducted, the production of this article, including the by-products—molasses, rum, and alcohol—having a valuation of considerably over $1,000,000 annually. The largest sugar estate in Central America is situated a few miles from Corinto on the west coast.

Bananas are grown in large quantities in the Bluefields region and shipped to New Orleans.

Cacao ranks in importance after coffee, sugar, and bananas among the cultivated resources of western Nicaragua, and it is recognized as a remunerative product. At present the entire output is consumed in the country, the selling price being from 20 to 25 cents gold per pound. Two varieties of cacao trees are grown, and the Government is encouraging the industry by granting premiums for every planted tree coming into bearing. The average yield from each tree is about 2 pounds when in full bearing, or about 600 pounds to the acre.

PLANTAIN FOREST IN NICARAGUA.

The platano, known to the English-speaking world as the plantain, is the largest member of the banana family. The cultivation of bananas in Nicaragua is one of the most important sources of the country's national wealth.

Tobacco is grown in several districts, the best being produced on the island of Omotepe, in Lake Nicaragua.

The principal crops are corn, rice, beans, bananas, cacao, sugar cane, tobacco, and fruits.

Cattle, horses, and swine are reared, the number of cattle being estimated at about 1,200,000.

The forests contain mahogany and cedar, which figure largely in the country's exports, many valuable timbers, dyewoods, such as logwood, and medicinal plants. Gums and resins abound, and the native camphor tree is said to yield a variety equal to that produced in the Far East. Vanilla of an excellent quality grows freely, and senna is a native product.

Manufacturing industries are confined mainly to articles of domestic consumption, and include the manufacture of furniture, boots and shoes, sugar, rum, beer, candles, cigars, cigarettes, and soap.

But it is the gold deposits that have perhaps contributed most in the matter of actual wealth to Nicaragua. From the date of first discovery through the years to present times, the adventurous have journeyed up the rivers and toiled across the table-lands there, seeking elusive evidence of the highest-prized metal.

GOLD is the most useless and yet the most precious of metals. Pure, its service to science and industry is so small by comparison as to be almost negligible. This paradox of value has been brought about by the development of our civilization, in which the yellow metal, to use the common figure, has become the standard medium of exchange and the visible measure of secular wealth.

SORTING GOLD ORE IN NICARAGUA.

Gold-bearing ore is found in many parts of the country, and placer mining along the rivers of Nicaragua has been carried on for many years.

Economists will prove that the intrinsic worth of gold is small and that, outside of the arts, its economic value is almost nil; yet such proof will deter no prospector from undertaking a voyage, involving the greatest hardships, in search of glittering nuggets.

The characteristics of gold as a metal are its beautiful yellow color, which it preserves untarnished on exposure to the atmosphere under nearly all conditions, its luster, high specific gravity, and ductility and malleability. A single grain may be drawn into a wire 500 feet in length, or beaten out to cover nearly 80 square inches of surface. The pure metal is somewhat harder than lead, but softer than copper, silver, platinum, zinc, or iron. Gold alloys with most metals. This property allows it to be extensively used where it would not serve in its pure state. Practically it is alloyed with copper or silver, and the proportion of gold contained in an alloy is expressed in degrees of fineness or as "carats" and carat grains (4 grains = 1 carat). The carat value of gold is expressed in parts of 24, pure gold being 24 carats fine.

Thus 18-caret fine contains 18 parts of pure gold and 6 parts of alloy, generally copper or silver or both. Etomologically, gold is of Anglo-Saxon derivation, being akin to the word geolu, from which the modern English word yellow is traced.

The distribution of gold-bearing deposits is world-wide, although the relative importance of different localities is very different; their geological range is also very extensive.

A COFFEE-BEARING PLANT.

The ancients obtained gold from the Spanish Peninsula, Greece, Asia Minor, and India. The ophir of the Bible has been variously located and the best evidence puts that famous mine in East Africa. In our own times gold is found in every part of the globe. From Russia in Asia, westward around to Alaska, and from the Gold Coast of Africa to the shores of Australia, this most prized of metals lies hidden in the earth. Streams winding through every land carry minute glittering particles in the sands of their channels that pan as gold, while quartz veins shotted with the metal seam the mountain sides. Nuggets of remarkable size are occasionally found and of these the largest was the "Welcome," a metamorphic mass of gold dug up in Australia that weighed 184 pounds, assayed 99.2 fine, and netted $46,625 when melted down. Another giant specimen is a nugget from the Ural, weighing 100 pounds, and now preserved in St. Petersburg.

The history of gold is the world history of the more advanced peoples. The story of the development of the metal from its first use as a beautiful ornamentation to its service as a circulating monetary medium, would include a recital of the annals of all nations that have any claim to civilization. The gold ornaments found in the tombs and other burial places of the Egyptians attest the value set upon this substance in the earliest recorded times, while any statement on its modern appraisement would be superfluous.

The lure of gold led Columbus to America, where the fabled tales of "The gilded one" brought the Spanish hosts to track the Tropics of the new world and trace the outlines of a score of modern nations. Images and gold dust were found in the possession of many native tribes and soon the galleons of the King of Spain were crossing the seas, deep laden with the yellow metal. And much of this originated in Nicaragua. Other Spanish colonies contributed their share and then, as to-day, gold was derived from the lands and rivers bed of Mexico, Panama, Peru, and what is now Colombia. But it was not until modern times that the richest South American gold deposit was found, the Callao mine, in Venezuela, south of the Orinoco, which produced a value of $25,000,000 in the 20 years of its most prosperous working.

The treasures of Montezuma are lost and the ransom of Atahualpa has long been dissipated, yet the auriferous lands that yielded the gold of pre-Spanish days still hold much of the metal. Latter-day explorers who have been searching out the most hidden places on the eastern Andean slopes, report many sure indications of gold-bearing quartz, only waiting the ingenuity and skill of man to devise the method that will make the exploitation of these regions profitable. In addition to the countries mentioned, there is Bolivia, a land that holds a vast treasure of gold locked in her mountain fastnesses; Chile, which produced over $325,000,000 in gold during the 18th century; and Argentina, where the gold mines in La Rioja are being successfully worked to-day. With cheaper transportation the gold production of Latin America will rapidly increase.

The most common use of gold is, of course, in coinage. The rareness of the metal and its attractive characteristics have made it an ideal circulating medium. However, the quality of softness prohibits gold coins being made without alloys. The first gold coins of England were made in 1257, during the reign of Henry III, and they were pure. An alloy was soon added and has formed part of coinage fusion ever since. The American eagle is of nine parts gold and one part copper, while the English sovereign contains a slightly higher percentage of the more valuable metal. The lowest recognized standard of gold must be 9 carats fine, although inferior fusions are worked up into ornaments and sold as real gold. In England the "hall mark" attests the true fineness of any gold, and false marking is punished very severely. After coinage, most of the gold produced is converted into ornaments or combined in jewelry. The world's consumption of this metal in the arts has averaged over a value of $100,000,000 during the last few years, approximating one-quarter of the total output of the metal. These two uses account for practically the entire world consumption, as the small amounts used in dentistry, surgery, and in other ways, are inconsiderable by comparison.

The remarkable increase in the world's gold production during the last 10 years—from $250,000,000 to nearly $500,000,000 (estimated)—is giving economists much to think upon, and has led to a number of speculations anent the future effect of this continued augmentation of output. What will be the result when the Latin-American gold fields are developed to the fullness of their capacity? All these Republics have most liberally interpreted mining laws and encourage in every way the investment of capital in mining enterprises, so an increased familiarity with the opportunities offered by these countries will insure an exploitation of their gold deposits and a consequent increased output of precious metal that will serve for further speculation among students of social economy.

Owing to various retarding causes the Nicaraguan gold country has been hardly scratched, yet past history and present indications promise that native gold will be one of the nation's greatest resources.

THE COFFEE BERRY.

Of the more than 500 mines registered in the bureau of statistics of the Republic 494 are producers of gold, while silver and copper mines and quarries of valuable stone are scattered throughout the country.

American and English companies have secured mining concessions in various districts, and it is probable that increased investments will be made by them in the mines of the country. A number of the principal mines on the west coast, included in which are the Santa Francisca, San Lucas, Amaya, San Cristobal, Quilali, and San Juan Tetelpaneca, are in the hands of English capitalists, while the Leoneas mine, near Matagalpa, has recently been acquired by a company largely interested in West Australian mining properties.

The Atlantic slope is the great placer-mining district of the country, Prinzapolka being the center of active operations at present. There are rich quartz mines in this district, and in the district of Leguoia large gold-bearing reefs are known to exist, but they are at present undeveloped.

RAILWAYS AND INTERIOR WATERWAYS.

The National Railroad of Nicaragua is the only line operating in the Republic. It traverses a comparatively small district in the extreme western portion of the Republic and with its several branches represents a total length of 275 kilometers (171 miles). Starting from the port of Corinto, on the Pacific coast, it extends in a northwesterly direction for a distance of some 12 miles to the city of Chinandega and thence southeastwardly to Leon, Managua, Masaya, Granada, and Diriamba.

About 20 miles of the southeastern section of this railroad penetrates one of the chief coffee-growing regions of Nicaragua. A portion of these regions is somewhat mountainous in character, the highest point being 1,644 feet above the sea level. With this exception the road extends through a comparatively low and unbroken country which is devoted chiefly to agriculture and stock raising.

The gauge of the road is 42 inches, the maximum grade 28 feet to the thousand, and the weight of the rails 30 to 40 pounds per yard. The road was built by sections, covering a period dating from 1884 to 1903. It is the property of the Republic, but on December 26, 1903, was leased for a term of 10 years to a citizen of Germany. The terms of the lease provide that 25 per cent of the earnings shall be paid to the Government, 10 per cent shall be devoted to repairs, and the remainder goes to the holder of the lease, who must pay therefrom operative and administrative expenses.

In the surveys for an intercontinental railroad from New York to Buenos Aires the National Railroad of Nicaragua was accepted as one of the integral parts of the system, the portion embraced extending from Corinto to Granada.

There are 20 miles of private railways on the Atlantic coast near the Rio Grande and 3 miles of private steam tramways on the west side of Lake Nicaragua.

Preliminary surveys were made in September, 1910, for a railroad to run from Rama, on the Siquia River about 40 miles from Bluefields, to San Ubaldo, on Lake Nicaragua, a distance of 112 miles. The extension of the line from Rama to Bluefields is also contemplated. Inasmuch as the present Government is very favorable to railroad development as a means of exploiting the resources of the Republic, it appears probable that the project will be carried to a successful conclusion, thus providing much quicker and cheaper transportation between the oceans than is now possible by means of the rivers and cart roads.

Routes have been surveyed for proposed railroads from Monkey Point, on the Atlantic, to San Miguelito, on Lake Nicaragua, a distance of 116 miles, and from Momotombo, on Lake Managua, to Matagalpa, an important city in the coffee district. Some construction work was done on these lines, but was discontinued and the new route to the Atlantic via Rama will in all probability be completed first.

Nicaragua has a number of rivers of varying sizes and lengths which flow eastward through the Republic into the Caribbean Sea. The four principal rivers of the country, all of which drain the eastern slope of the cordillera, are the San Juan, the Coco or Segovia, the Grande or Matagalpa, and the Mico or Bluefields, the waters of which run into the Caribbean Sea.

Notable among these rivers, though not the longest, is the San Juan, which has a total length of 140 miles, and is considered by many to be the most important stream in Central America, inasmuch as it joins the great lake system of Nicaragua with the Atlantic Ocean, and by means of it communication is established with the important cities in that region, as well as with the capital itself. A regular steamship service is maintained on the San Juan River between San Juan del Norte, at its mouth, and the city of Granada, on Lake Nicaragua. This river receives many large and small

PICKING COFFEE.

Coffee represents the chief agricultural industry of Nicaragua. The crop for the year 1909-10 is estimated at about 22,300,000 pounds, the value of which will constitute more than one-third of the total exports of the Republic.

tributaries, some of which rise in Nicaragua and others in the neighboring Republic of Costa Rica, and is navigable for a distance of 120 miles.

The longest river is the Coco, or Segovia River, which rises on the eastern crests of the cordillera and courses through mountain passes, undulating plains, and picturesque valleys for a distance of 300 miles before emptying into the Caribbean Sea. It is navigable for some 240 miles, the last 110 miles for light-draft vessels only. No other river in Latin America has such a diversity of names as has the Coco or Segovia River. For the first 50 miles this stream is known as the Somoro River, after which it takes the names of Cabrugal or Cadrullal, Coco or Cocos, Yoro or Yare, Portillo, Liso, Tabacac, Encuentro, Pantasma, Segovia, Gracias or Cape River, Hervias River, and at its very mouth the English have called it Wanks or Yankes River.

Another stream of considerable importance and of a length of 230 miles is the Grande or Matagalpa River, called at its mouth "Barra del Desastre" (Bar of Disaster), a name given it by Columbus, who, it is said, on disembarking there lost a boat and some men in its turbulent waters. The Mico is also an important river. At its source this stream is called the Mico River, but afterwards takes the name of Bluefields River, by which designation it is known throughout the principal part of its course.

The Rama is navigable for some 40 miles, as far as the city of Rama, while the Rio Grande, although one of the largest streams, is navigable only partially, owing to its rapids, which make navigation dangerous and difficult.

Lake Nicaragua has an extension of 96 by 40 miles, and is navigable throughout for large vessels. Lake Managua, situated but a short distance from Lake Nicaragua, with which it is connected by the Tipitapa River, is 38 miles long and from 10 to 16 miles wide, it being likewise navigable.

THE PRESS OF NICARAGUA.

The first printing press in Central America was set up in 1660 in Guatemala, that city being then the capital of the so-called kingdom which embraced the 5 Republics as now known. The "Gazeta Mensual," founded in the first quarter of the next century, changing its name to "Gazeta de Guatemala," was at one time a power in the whole country. When the constitution of 1812 was reestablished and the press declared again free, the history of the press in Central America centered in that of Guatemala during the struggle of those countries for independence and their subsequent efforts to form a Central American Confederation.

The first periodical in Nicaragua itself was "El Telégrafo Nicaraguense," founded in the city of Leon in 1835. Then began the period of storm and stress in the entire country, and every portion was eager for its own public organ. Leon soon had the Boletin de Nicaragua (1839–1842), Granada El Ojo del Pueblo (1843–1844), Masaya and Managua Regristro Oficial (1845–1847), and Managua El Regenerador Nicaraguense in 1847. The first daily newspaper was the Diario de Nicaragua, founded in Granada in 1884, its name becoming before 1886 the Diario Nicaraguense. The political disturbances of recent years discouraged newspaper publication, but a few have survived from the end of the last century, and they still appear regularly.

The chief cities for the press are the capital, Managua, Leon, Granada, and Rivas, in the interior, and Bluefields on the east coast. Bluefields has one English and two Spanish papers, although these last have sections in English. They all appear once a week, and have telegraphic news from the United States, but have little circulation outside the city. Managua is the center of the country's activity, and its papers circulate freely on the west coast. Both morning and evening dailies are issued and widely read, the circulation averaging from 3,000 to 5,000. In the other cities mentioned, each of which has at least one paper, the circulation will be somewhat less. The largest measures 17 by 25 inches; the smallest is 12 by 8½ inches; four pages, with five or six columns, is the rule, but occasionally more pages may be added. Advertisements are displayed on all pages, those on the first page paying a higher rate. The column inch is the unit, costing more or less than 50 cents gold, according to position and number of insertions, but special arrangements can in all cases be made.

PANAMÁ

The Isthmus of Panama, which comprises the Republic of Panama and the Canal Zone, forms the connecting link between Central and South America. It has an area of 32,380 square miles and a population (estimated, 1910) of 419,029, or 13 per square mile.

Two mountain chains traverse the territory of the Republic, inclosing a number of valleys and plains which afford excellent pasturage for cattle and in which all the products of the Tropical Zone can be raised. The slopes of the mountains are covered with extensive forests.

Among the products for export, bananas, rubber, coconuts, ivory nuts, cocobcla wood, sarsaparilla, tortoise shell, mother-of-pearl, and hides and skins are the most important. Considerable gold is mined and exported, and deposits of silver, aluminum, coal, lead, iron, asbestos, and other minerals have been located.

Under the constitution adopted February 13, 1904, the Government is divided into legislative, executive, and judicial branches.

The legislative power is vested in the National Assembly, composed of one chamber with 32 members. Deputies are elected by direct popular vote for a term of four years at the rate of one deputy for every 10,000 inhabitants or fraction of 5,000 or more. An equal number of substitutes are elected at the same time, who take the place of the deputies in case of their absence, disability, or death. The National Assembly convenes in the city of Panama, the capital, once every two years on September 1, for a period of 90 days, which period may be extended 30 days, and extraordinary sessions may also be called by the President of the Republic.

COAT OF ARMS OF PANAMA.

The President, who receives an annual salary of $18,000, is likewise elected for a term of four years by popular vote, every citizen over 21 years of age being entitled to suffrage. He may not be reelected for the term immediately following his own, unless he resigns his office 18 months prior to the election. He is assisted by a cabinet of five secretaries. There is no vice president, but the National Assembly elects three "designados" every two years, who take the place of the President in their respective order in the event of his absence, disability, or death. The President (formerly first designado), the two designados, and members of the cabinet are as follows:

President: Sr. Pablo Arosemena (inaugurated Oct. 5, 1910).
First Designado: Sr. Federico Boyd.
Second Designado: Sr. Rodolfo Chiari.
Secretary of Government and Justice: Sr. H. Patiño.
Secretary of Foreign Relations: Sr. Federico Boyd.
Secretary of the Treasury: Sr. Aurelio Guardia.
Secretary of Public Instruction: Sr. Alfonso Preciado.
Secretary of Fomento (Promotion): Sr. Carlos C. Arosemena.

The Department of Government and Justice (Secretaría de Gobernación y Justicia) has charge of the administration of the Provinces and municipalities, the national and city police forces, the sanitary police and secret service, the city fire departments, the general elections and relations with the legislative power, the national archives, the bureau of weights and measures, and the Official Gazette, as well as the post offices, national telegraph system, and the care and education of the native Indians. The courts of justice, notaries public, the penal institutions, and all matters relating to the administration of justice are also under its jurisdiction.

PRESIDENT PABLO AROSEMENA.

The Department of Foreign Relations (Secretaría de Relaciones Exteriores) is intrusted with all matters usually pertaining to that department and of the diplomatic corps, including the settlement of international boundary disputes, congresses, and conventions, making of treaties, and all matters pertaining to the Panama Canal Zone and the maintenance of relations with the Panama Canal Commission of the United States.

The Department of the Treasury (Secretaría de Hacienda) prepares the annual budget of receipts and expenditures, collects all revenues, and disburses the national funds. The administration of the customhouses and the compilation of commercial statistics are functions of this department, while the National Mortgage Bank and the control of the national lottery are also intrusted to its care.

The Department of Public Instruction (Secretaría de Instrucción Pública) has charge of all elementary, secondary, and special schools and establishments of learning, both public and private, the National Museum, and the Pedagogical Library. Among the special schools are the School of Arts and Crafts, the College of Commerce and Languages, the National School of Music, and the National Institute. A school for teaching the native Indians and a kindergarten for small children have also been recently established.

The Department of Promotion (Secretaría de Fomento) has supervision of all matters relating to the promotion of the industries of the country, all means of communication and transportation, and the maintenance and construction of public works. Among its numerous sections are those of agriculture, mines, industries, immigration, patents and trade-marks, sanitation, sewerage and water supply, roads and bridges, ports and harbors, hospitals and asylums, and public buildings.

The judiciary consists of a supreme court of five judges (appointed by the President for a term of four years), a superior court, several circuit courts, and a number of municipal courts. The judges of the superior and circuit courts are appointed by the supreme court for four years, and the municipal judges by those of the circuit courts for a term of one year.

There is no army, but its place is taken by an efficiently organized and well-disciplined national police corps numbering about 1,000 officers and men. A steam launch of 454 tons serves the purpose of a revenue cutter.

There are 96 post offices in the Republic, handling about 2,500,000 pieces of mail matter annually, and 37 telegraph offices. The Government has entered into a contract with the United Fruit Co. for the establishment of a wireless telegraph station at Colon to communicate with the station of that company at Bocas del Toro.

Panama is divided politically into seven Provinces, which are again subdivided into municipalities, the former being administered by governors appointed by the President of the Republic for a term of one year, while the latter are governed by municipal councils, elected by direct vote for a term of two years, and by "alcaldes," or mayors, appointed by the governors of the Provinces for a term of one year.

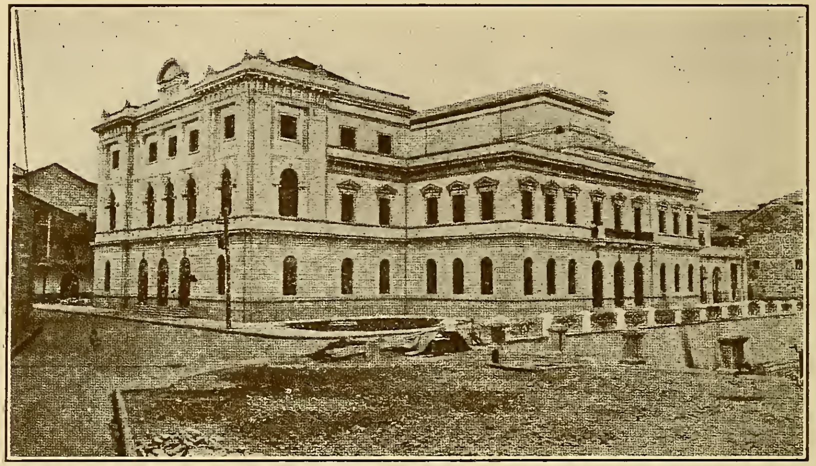
PANAMA IN 1910.

The year was scarcely opened when the Republic suffered the loss of President Obaldía, who died while in office, March 1, 1910. As the first designado, Sr. Arango, had died in March, 1909, the Presidency was administered by the second designado, Sr. Carlos A. Mendoza, until the inauguration into the office of Dr. Pablo Arosemena.

Peace with the world continued for the Republic. In order to extend the growing foreign relations of the nation new diplomatic and consular posts were arranged, and the older ones strengthened. The Panama-Costa Rica boundary question was advanced to the point awaiting the decision from the arbiter, the Chief Justice of the United States Supreme Court, which was expected in 1911. The Government ratified the conventions concluded at the Second International Peace Conference at The Hague in 1907 (in January, 1911), and an extradition treaty with Ecuador was entered into. Many conferences and congresses had delegates from the Republic in attendance during the year.

Financially the Government met its interest obligations, and accomplished certain necessary readjustments of its funds, but expenses for which the budget made no appropriation caused the issue of a supplemental credit. It is probable that this loan will be paid off by the end of two years.

Commercial conditions remained in 1910 about the same as those in 1909. Imports into Panama increased over those of the previous year, and exports also were greater. The exports from the United States to Panama continued large, while all ports in the Republic declared higher figures. This was particularly the case in the staples, like bananas, coconuts, hides and rubber. In regard to bananas, some recovery is noticeable, as the banana disease seems not to have made heavy inroads into new plantations.



THE CAPITOL IN THE CITY OF PANAMA.

The Republic of Panama has adopted in its constitution the legislative principle of the single chamber. The *Camara de Diputados* (House of Representatives) meets in this new building, which has accommodations for several of the cabinet offices also. In addition to the legislative and executive bodies, the structure takes in the National Theater, both buildings having been designed and completed together in April, 1908.

Serious attention was given by the Government to two problems with which the prosperity of the country seem intimately linked; the construction of the railway between Panama City and David, and the encouragement of immigration for permanent settlement. The National Assembly enacted a law authorizing the President to call for bids for the construction of a narrow-gauge railway, steam or electric power, to connect these two points, the cost to be met by a loan not to exceed $10,000,000, with interest at 5 per cent. The survey for this road has already been made by engineers from the Canal Commission, and approved. Another line, for which a concession was granted, is projected to open the Darien district in the eastern part of the Republic. When these two railways are completed there will be a line across the greater portion of the country and they will form an important link in the Pan American system. In the matter of immigration, a new law was passed favorable to the introduction of agricultural workers, and colonization contracts were signed.

FINANCE.

The total receipts of the Government for the year 1910, according to the report of Sr. Don Nicolas Victoria, director general of statistics, amounted to $3,544,337.58. There is as yet no report available either as to the total or the items of expenditure. The receipts were derived principally from the following sources:

Export and import duties	$1, 756, 981. 90
Interest on money on deposit	308, 387. 48
Tax on sale of liquor	162, 090. 10
Real estate tax	133, 306. 92
Slaughter tax	$132, 337. 66
Stamped paper and postage stamps	75, 157. 38
Lottery	74, 428. 52
Consular fees	71, 475. 58
Post office and telegraphs	69, 900. 03
Tax on production of liquors	51, 464. 06
Market tax	37, 250. 37
From State property	23, 169. 68
Lands	28, 422. 48
Registry fees	11, 196. 12
Lighthouse dues	5, 566. 51
Mining tax	3, 642. 20

FACSIMILE OF SILVER HALF BALBOA[1] OR PESO OF PANAMA.

[1] The standard of value in Panamanian money is the gold *balboa*, equal in value to $1 United States currency. However, no *balboas* have ever been coined, and the silver coin shown above is the largest denomination in circulation.

FOREIGN COMMERCE.

The foreign commerce of Panama for the year 1910 amounted to $11,826,323.65, of which $10,056,993.50 were imports and $1,769,330.15 were exports. The figures for the preceding year were: Imports, $8,756,307.64, and exports $1,502,474.71, or a total of $10,258,782.35. This shows a gain of $1,300,685.86 in imports and of $266,855.44 in exports, or a total gain for the year in foreign commerce of $1,567,541.30.

IMPORTS.

The imports by principal countries for the last three years were as follows:

Countries.	1908	1909	1910
United States	$4,459,777.80	$4,996,626.63	$5,652,653.46
United Kingdom	1,553,552.55	1,762,411.33	2,166,988.65
Germany	793,583.16	914,756.41	966,151.34
France	385,868.43	297,352.22	307,981.93
China and Japan	128,951.69	180,245.52	229,938.49
Italy	154,002.08	210,426.37	198,466.49
Spanish America	172,881.94	152,345.38	187,341.84
Spain	80,639.52	133,823.84	149,021.84
Belgium	77,554.69	108,319.94	101,435.62
Switzerland			79,939.34
Denmark			13,947.30
Austria-Hungary			3,127.20
Total	7,806,811.86	8,756,307.64	10,056,993.50

There were increases in the imports from all the leading countries above except from Italy and Belgium. The increase in imports from the United States was $656,026.83, or 13.1 per cent; United Kingdom, $404,577.32, or 22.9 per cent; Germany, $51,394.93, or 5.6 per cent; France, $10,629.71, or 3.5 per cent; China and Japan, $49,692.97, or 27.6 per cent; Spanish America, $34,996.46, or 22.9 per cent; and Spain, $15,198, or 11.3 per cent. The decrease in imports from Italy amounted to $11,959.88, or 5.7 per cent, and from Belgium, $6,884.32, or 6.3 per cent.

The imports for the last three years, classified under 11 major heads, were as follows:

	1908	1909	1910
Vegetable products	$1,879,297.42	$2,251,767.22	$2,722,868.66
Textiles	1,178,802.38	1,712,828.82	1,847,182.21
Animal products	1,258,900.77	1,510,822.16	1,700,813.11
Mineral products	808,775.50	943,398.10	976,413.17
Liquors and mineral waters	675,703.20	649,690.76	747,109.66
Chemical and pharmaceutical products	350,161.94	384,243.73	440,931.18
Machinery and apparatus	229,836.72	228,174.53	256,197.87
Paper and manufactures of	74,671.30	125,487.82	159,256.30
Arms and explosives	39,744.56	45,192.61	53,951.98
Vehicles	54,946.45	56,252.37	42,510.20
Miscellaneous	1,255,971.62	848,449.52	1,109,759.16
Total	7,806,811.86	8,756,307.64	10,056,993.50

Vegetable products: The imports by countries for the year 1910 were:

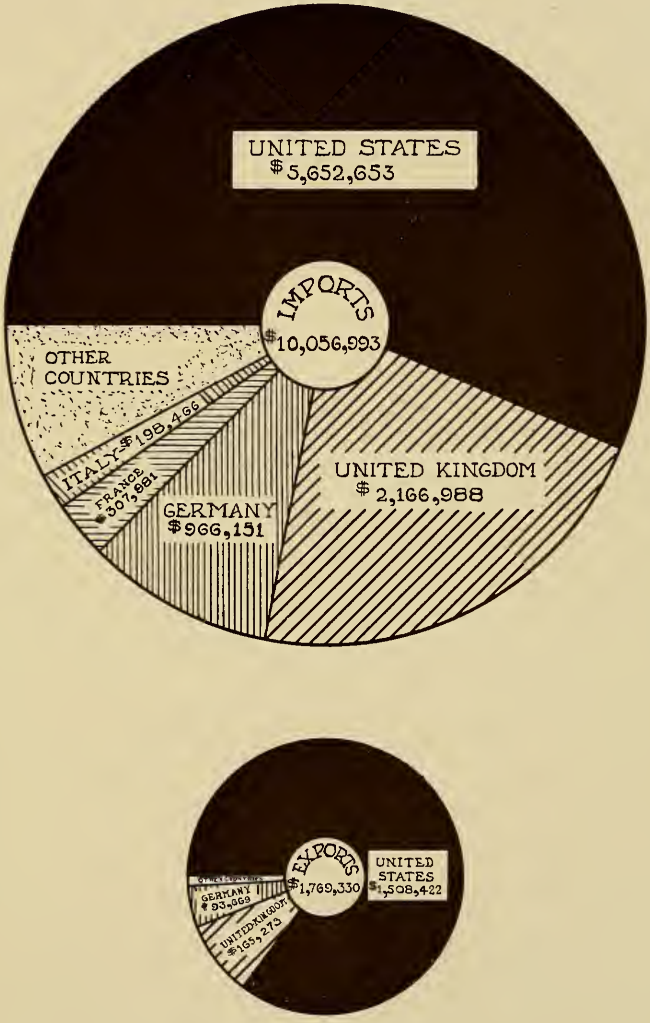
United States	$1,703,146.35
United Kingdom	340,779.51
Germany	265,908.91
Spanish America	168,672.96
China and Japan	102,679.44
Italy	73,763.92
Spain	40,280.81
Belgium	28,978.94
France	27,140.82
Austria-Hungary	1,785.00
Switzerland	132.00

Under vegetable products the principal articles were: Rice, $347,774, of which $205,254 was from Germany, $110,425 from the United Kingdom, $17,919 from China and Japan, and $7,057 from the United States. Coffee, $51,035, of which $42,935 was from Spanish America and $8,098 from the United States. Beans, $60,415, of which

• PANAMA •

— COMMERCE — 1910 —

$11,826,323



Pan American Union
Wash., D.C.

H.M.Rivero.

$46,857 was from the United States, and $12,909 from Spanish America. Potatoes, $70,796, of which $52,753 from the United States, and $16,424 from the United Kingdom. Olive oil, $126,369, of which $101,900 from the United States, $8,492 from Italy, and $12,961 from France. Sugar, $184,949, of which from the United States $65,822, from Spanish America $76,886, from Germany $30,918, and from the United Kingdom $11,318. Biscuits, $75,349, of which $49,272 from the United States, and $23,991 from the United Kingdom. Wheat flour, $383,709, all from the United States. Opium, $86,364, of which from China and Japan $66,440, and from the United Kingdom $16,924. Lumber, $263,257, practically all from the United States. Furniture, $168,099, of which $136,913 from the United States, $17,617 from Germany, and $11,063 from the United Kingdom.

Textiles: The imports by countries for the year 1910 were:

United Kingdom	$957, 332. 26
United States	554, 415. 23
Germany	116, 377. 01
China and Japan	74, 663. 71
Switzerland	56, 081. 96
Italy	55, 501. 20
Spain	22, 301. 32
France	10, 526. 78
Belgium	1, 739. 56
Spanish America	213. 50

Under textiles the principal articles were: Cotton cloth, $844,514, of which $514,797 was from the United Kingdom; $236,266 from the United States, $57,468 from Germany, and $15,637 from Italy. Woolens, $197,251, of which $179,341 was from the United Kingdom, $7,271 from Germany, and $5,195 from the United States. Linens, $72,469, of which $52,762 was from the United Kingdom, $10,563 from China and Japan, and $2,102 from Switzerland. Silks, $68,909, of which $47,928 was from China and Japan, $7,563 from the United Kingdom, and $4,327 from Switzerland. Ready-made clothing, $498,561, of which $288,237 was from the United States, $111,016 from the United Kingdom, $32,425 from Switzerland, and $28,023 from Germany.

Animal products: The imports by countries for the year 1910 were:

United States	$1, 229, 904. 83
United Kingdom	183, 479. 02
Germany	154, 676. 90
Spain	30, 908. 02
Italy	31, 664. 94
China and Japan	19, 507. 35
France	17, 951. 72
Belgium	14, 302. 87
Denmark	13, 947. 30
Spanish America	5, 470. 16

Under animal products the principal articles were: Codfish, $71,377; corned beef, $78,918; and salt pork, $75,894; practically all from the United States. Canned and preserved meats and fish, $213,869, of which $141,840 was from the United States, $29,374 from the United Kingdom, $8,893 from China and Japan, $11,839 from France, and $6,320 from Italy. Condensed milk, $179,087, of which $108,318 was from Germany, $31,634 from the United Kingdom, $18,532 from the United States, and $16,840 from Italy. Lard, $157,638, of which $155,096 was from the United States. Butter, $78,215, of which $26,567 was from Germany, $20,510 from the United Kingdom, $14,208 from the United States, and $13,947 from Denmark. Boots and shoes, $517, 286, of which $494,918 was from the United States, and $10,153 from China and Japan.

Mineral products: The imports by countries for the year 1910 were:

United States	$677, 457. 11
United Kingdom	132, 877. 94
Germany	104, 822. 04
Belgium	27, 253. 51
Italy	17, 016. 64
China and Japan	6, 331. 57
France	6, 253. 70
Spain	3, 531. 89
Spanish America	834. 77

The principal articles under mineral products were: Bar steel, $44,441, of which $35,642 was from the United States and $3,829 from Belgium. Fence wire, $40,965, of which $40,960 was from the United States. Sheet iron, $63,912, of which $30,498 was from the United Kingdom and $33,445 from the United States. Small hardware, $127,945, of which $95,359 was from the United States, $23,410 from the United Kingdom, and $9,367 from Germany. Petroleum, $88,336, of which $82,311 was from the United States. Cement, $77,528, of which $40,320 was from the United States, $22,203 from Germany, and $11,894 from Belgium.

Liquors and mineral waters: The imports by countries for the year 1910 were:

United States	$344, 111. 74
France	152, 397. 20
United Kingdom	118, 475. 50
Germany	54, 878. 11
Spain	41, 097. 29
Italy	16, 658. 84
Belgium	16, 398. 84
Austria-Hungary	1, 342. 20
China and Japan	604. 00
Spanish America	336. 00
Switzerland	282. 70

The principal articles under liquors and mineral waters were: Beer $293,712, of which $218,439 was from the United States, $42,166 from the United Kingdom, and $28,721 from Germany. Cognac $40,921, of which $40,026 was from France. Ordinary red wines $108,925, of which $51,599 was from France, $24,533 from Spain, $22,982 from the United States, and $5,473 from Italy. Whisky $84,821, of which $57,846 was from the United States and $26,095 from the United Kingdom.

Chemical and pharmaceutical products: The imports by countries for the year 1910 were:

United States	$238, 569. 63
United Kingdom	89, 999. 99
Germany	65, 873. 17
France	33, 053. 55
Italy	7, 559. 94
China and Japan	3, 929. 51
Belgium	3, 647. 51
Spain	1, 141. 39
Switzerland	114. 77

The principal articles under chemical and pharmaceutical products were: Prepared paints $39,674, of which $21,614 was from the United Kingdom, and $17,147 from the United States. Matches $29,721, practically all from Germany.

Machinery and apparatus: The imports by countries for the year 1910 were:

United States	$192,398.42
United Kingdom	33,508.08
Germany	25,537.41
France	2,472.56
Italy	974.24
Spain	785.69
China and Japan	354.70
Belgium	101.77
Spanish America	65.00

The principal articles under this heading were: Lamps $26,519. Sewing machines $36,105, of which $17,370 was from the United States. Other machines and machinery $121,721, of which $88,916 was from the United States and $29,314 from the United Kingdom.

Paper and manufactures: The imports by countries for the year 1910 were:

United States	$90,454.13
Germany	38,747.72
United Kingdom	13,382.29
France	5,361.45
Spain	4,461.39
Spanish America	2,500.71
Belgium	1,981.62
Italy	953.80
Switzerland	770.65
China and Japan	642.53

The principal articles under this heading were: Books, pamphlets, and other prints $69,035, of which $40,770 was from the United States, $11,001 from Germany, and $7,085 from the United Kingdom. Blank paper of all kinds $58,895, of which $24,472 was from Germany, $26,717 from the United States, and $4,217 from the United Kingdom.

Arms and explosives: The imports by countries for the year 1910 were:

United States	$27,939.77
United Kingdom	9,457.44
China and Japan	6,281.62
Germany	3,914.01
Belgium	3,036.36
Spain	2,352.76
France	485.02
Spanish America	485.00

The total imports under this head from China and Japan consisted of artificial fireworks.

Vehicles: The imports by countries for the year 1910 were:

United States	$37,782.21
United Kingdom	2,890.40
Spanish America	836.92
Italy	658.40
Spain	139.20
France	128.55
Germany	74.52

Under this heading the imports were: Automobiles, $4,780, all from the United States; bicycles, $14,301, of which $10,790 was from the United States and $2,611 from the United Kingdom; carts and wagons, $4,017, all from the United States; carriages, $19,412, of which $18,195 was from the United States.

Miscellaneous: The imports by countries for the year 1910 were:

United States	$556, 474. 14
United Kingdom	285, 806. 22
Germany	133, 341. 53
France	52, 210. 58
Italy	26, 114. 57
Switzerland	22, 557. 26
China and Japan	14, 880. 38
Spanish America	7, 926. 82
Belgium	6, 425. 58
Spain	2, 022. 06

The principal articles under this heading were: Common soap, $124,113, of which $83,611 was from the United States and $39,757 from the United Kingdom. Toys, $23,473, of which $11,526 was from Germany, $7,475 from the United States, and $3,394 from the United Kingdom. Electrical material, $78,345, of which $42,979 was from the United States and $33,158 from the United Kingdom. Notions, $184,402, of which $78,376 was from the United Kingdom, $43,876 from the United States, $22,179 from Germany, $19,877 from France, and $21,992 from Switzerland. Plumbers' supplies, $33,435, of which $32,027 was from the United States. Perfumery, $66,451, of which $18,863 was from the United States, $14,162 from Germany, $13,132 from the United Kingdom, and $15,041 from France. Straw hats, $77,440, of which $32,457 was from the United Kingdom, $28,334 from the United States, $6,065 from Italy, $5,114 from Germany, and $5,114 from Spanish America. Stationers' supplies, $48,063, of which $29,174 was from the United States, $11,529 from Germany, and $2,395 from the United Kingdom.

Trade by ports: The imports by ports of entry for the year 1910 were:

Ports.	Kilos.	Value.
Balboa (Panama)	3, 839, 651	$175, 453. 53
Bocas del Toro	16, 630, 100	967, 093. 37
Colon	108, 093, 626	8, 914, 446. 60
Total	128, 563, 377	10, 056, 993. 50

EXPORTS.

The exports by countries for the year 1910 and for the two preceding years were as follows:

Countries.	1908	1909	1910
United States	$1, 653, 741. 44	$1, 264, 905. 70	$1, 508, 421. 94
United Kingdom	112, 412. 71	142, 174. 36	165, 273. 30
Germany	37, 885. 35	86, 972. 35	93, 668. 91
France	12, 264. 50	3, 770. 00	1, 966. 00
Other countries	10, 746. 28	4, 652. 30	....
Total	1, 827, 050. 28	1, 502, 474. 71	1, 769, 330. 15

There were increases for the year 1910 in the exports to all the countries given above, except in exports to France. The increase in the exports to the United States was $243,516.24, or 19.2 per cent; to the United Kingdom $23,098.94, or 16.2 per cent; to Germany $6,696.56, or 7.7 per cent. The decrease to France was $804, or 21.3 per cent.

The exports for the years 1909 and 1910 by classes were as follows:

	1909	1910
Animal products	$138,714.56	$184,918.04
Mineral products	109,163.61	135,332.30
Vegetable products	1,250,127.84	1,449,079.81
Miscellaneous products	4,468.70	....
Total	1,502,474.71	1,769,330.15

STATUE OF COLUMBUS, CRISTOBAL, PANAMA.

Animal products: The exports under this heading by countries for the year 1910 were as follows:

United States	$110,120.87
United Kingdom	17,927.75
Germany	56,869.42
Total	184,918.04

Under animal products are included tortoise shell $16,669, of which $9,439 went to Germany, $5,987 to the United Kingdom, and $1,243 to the United States. Mother-of-pearl $50,914, of which $45,378 went to Germany, $5,066 to the United Kingdom, and $380 to the United States. Hides $84,864, of which $82,823 went to the United States, $1,866 to Germany, and $175 to the United Kingdom. Horns $7,049, of which $6,610 went to the United Kingdom, $383 to the United States, and $56 to Germany. Skins, $23,748, of which $23,618 went to the United States, and $130 to Germany. Live turtles $1,673, all to the United States.

Mineral products: The exports under this heading by countries for the year 1910 were as follows:

United Kingdom	$135,225.30
United States	107.00
Total	135,332.30

Under mineral products are included scrap copper $375, of which $250 went to the United Kingdom, and $107 to the United States and bar gold $134,975, all to the United Kingdom.

Vegetable products: The exports by countries for the year 1910 were:

United States	$1,398,194.07
United Kingdom	12,120.25
Germany	36,799.49
France	1,966.00
Total	1,449,079.81

Under vegetable products are included: Cacao $4,700, of which $2,330 went to Germany, $2,040 to the United Kingdom, and $330 to France. Rubber $172,634, of which $156,428 went to the United States, $14,702 to Germany, $1,068 to the United Kingdom, and $436 to France. Coconuts $157,671, all to the United States. Bananas $921,286, all to the United States. Ipecac $1,100, of which $915 went to the United States, and $195 to the United Kingdom. Medlar juice $10,619, of which $6,575 went to the United States, and $4,044 to Germany. Cocobolo wood $35,662, of which $31,512 went to the United States, $2,500 to Germany, $1,200 to France, and $450 to the United Kingdom. Ivory nuts $132,636, of which $122,911 went to the United States, $9,375 to Germany, and $350 to the United Kingdom. Sarsaparilla $10,496, of which the United Kingdom took $8,007, Germany $2,109, and the United States $380. Mahogany $1,900, of which Germany took $1,700, and the United States $200. Miscellaneous $366, of which $351 went to the United States, $10 to the United Kingdom, and $5 to Germany.

Trade by ports: The exports by ports of departure for the year 1910 were:

	Kilos.	Value.
Bocas del Toro	114,950,840	$980,879.60
Colon	6,525,290	681,896.68
Portobelo	4,856,060	106,553.87
Total	126,332,190	1,769,330.15

PRODUCTS AND INDUSTRIES.

The soil of the Republic is of marked fertility, and climatic conditions induce a luxuriant growth of tropical vegetation. Only a small part of the area of the country is under cultivation, although the Government, alive to the importance of agriculture as a factor in the development of the resources of the country, is interesting itself in promoting the cultivation of coffee, cacao, coconuts, rubber, vanilla, and sugar cane, all of which articles are exempt from taxation.

The cultivation of bananas is the principal industry, and the acreage devoted to the production of this fruit shows a steady increase.

Cacao is grown on a small scale, and both cacao and rubber trees have been planted. Rubber is one of the exports, the output coming from trees scattered naturally in the forests. These forests contain an abundance of cabinet, dye, and building woods, which are becoming a profitable field for investment. Sugar cane, tobacco, rice, corn, and many vegetables and fruits, grow easily and well in various parts of the

UP COUNTRY IN PANAMA.

Upper picture: A street in David. Lower picture: A stretch of llano between David and Alanje.

Isthmus, and the department of fomento (promotion), besides making a systematic study of the agricultural possibilities of the soil in the different Provinces, is offering aid to genuine colonists and arranging for the distribution of land under favorable conditions.

Stock raising is also being encouraged, and the importation, duty free. of cattle for breeding purposes. It is estimated that there are over 50,000 head of cattle in the Republic, but grazing lands not occupied can nourish 10 times that number.

Mining is being carried on, and the existence of gold deposits has been known for years. One company is working steadily, and several promising mines have been recently denounced, gold and copper among them. The known mining regions are in the Darien district and the Province of Veraguas. Other metals have been located in the interior of the Republic, deposits of coal are known to exist, coral and sponges are found off both coasts, and pearls are obtained from the Pearl Islands in Panama Bay.

Industrially Panama is progressing admirably. There are sugar mills in the Republic, and the Government encourages the establishment of others. A refinery also has a concession, and it is to be equipped with the latest and best machinery. The making of Panama hats has now become a settled industry on the Isthmus. At Chepigana, Province of Panama, the plant from which the straw from the hats is made, called toquilla in Ecuador, is manufactured into the same article here. The plant grows wild in many parts of the Republic, and the Government, with the object of utilizing it, sent a commissioner to Ecuador to study the process. On his return he brought two expert hat makers with him, and with their assistance he established a school in Arriajan. This school has produced the desired results, and consignments of hats have been made to merchants in the capital. They are of good quality, and their sale will increase this industry in the country.[1]

COCONUTS form one of the staple exports of Panama, over $150,000 worth being sent in 1910 to the United States. The coconut palm is said to have as many uses as there are days in the year, and it supplies man with food, drink, medicine, clothing, light, household utensils, and the house itself. Whether the tree came originally from the Eastern Archipelago or is a native of America—and this latter hypothesis seems the more tenable—it has spread all over the Tropics, and grows wild or is cultivated in every country of the Pan American Union. Usually seen along the coast, it may nevertheless do well at an elevation of 4,500 feet above the level of the sea. The life of the bearing tree may pass the century mark, but the best productive period of the coconut palm is from 8 to 40 years. It begins to yield, if in favorable conditions, at the fifth year, and gives a profitable harvest to him who cultivates it properly. The coconut is really now-a-days a commercial article, and is finding its way more and more into the markets of the northern cities. Twenty-eight per cent of all the coconuts raised in the world are grown in the Americas, where, however, they are scattered over a much greater area for each palm than is the case in the Orient, thereby making the work of collecting and shipping more difficult and expensive. Thus many of the natural palm regions have never been extensively exploited, but the approaching completion of the Panama Canal will rapidly bring these fields within the radius of profit. Both coasts of Panama have already benefited by the increased transportation of the last few years, and new plantations are receiving fresh attention, while the older areas, on both mainland and islands, maintain their long standing popularity. Panama has for generations been famous for coconuts, and one of the best beloved poets of the Tropics has called that region "The land of the coconut tree."

PEARLS from Panama have been famous since the isthmus was crossed by Balboa. To convince their Catholic majesties of the great value of the Pacific Ocean and the riches contained therein, the discoverer of those waters sent back quantities of the

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[1] From report of Consul General Alban G. Snyder, Panama.

Courtesy of the Philadelphia Commercial Museum.

GATHERING COCONUTS.

From the San Blas coast of Panama alone 6,000,000 nuts are shipped annually to the United States These nuts average from $33 to $45 per thousand on the New York market and are considered to be of the finest quality in the world.

nacreous gems gathered on the shores, with an affidavit to the effect of how and where they were found.

Columbus had met natives wearing ropes of pearls during the Caribbean cruises and was fortunate enough to secure a beautiful specimen weighing 300 grains which he presented to his queen. Cortes found the black pearls of western Mexico waters worn by the natives of what is now lower California; while De Soto ravished the tombs of the Yuckee Indians in Florida of the gems they held, and robbed their queen of her most precious ornament, a splendid string of pearls. The avarice of these explorers was only exceeded by their quality of courage.

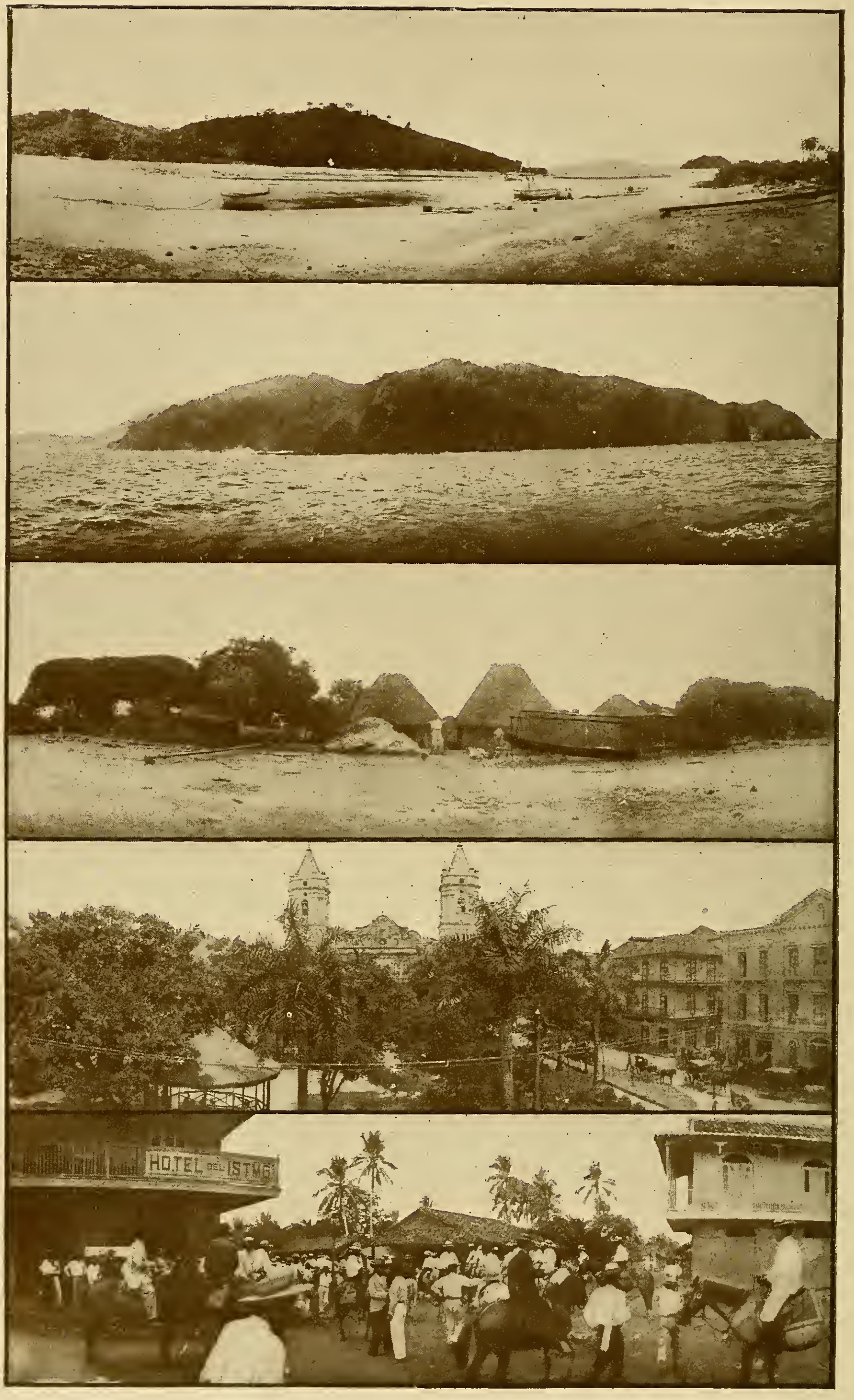
(Courtesy of "The Garden Magazine.")

COCONUTS IN ONE OF THE EARLIER STAGES OF GROWTH.

Later they bend the stalk with their weight.

Pearls are of extreme antiquity, for records of their existence in China are found that show they were gathered 1000 B. C., while in the same country, 22 centuries before our present era, pearls were taken as taxes. Pearls of the Orient adorned the dresses of the patrician Roman woman; and the story of Cleopatra's expensive compliment to Marc Anthony, when she dissolved a pearl in wine and drank his health in it, proves the existence of the gems in Egypt.

These jewels are found in the Indian Ocean, the Persian Gulf, off the shores of Thursday Island, western Australia, the Sulu group, and in the waters of the Caribbean Sea and Pacific Ocean where they wash the West Indies, Venezuela, Mexico, and Central America.



THE PEARL FISHERIES OF PANAMA.

1. Sheltered cove in the Pearl Islands where the fishers run on the approach of a storm. 2. Rugged coast of the Secas Islands where in March, 1909, was found the Anguizola pearl weighing 42 carats. 3. Pearl fishing village of the Pearl Islands. 4. The twin towers of the old cathedral of Panama City which are thickly studded with mother-of-pearl shells of exceptional size and beauty from the Pearl Island fisheries. 5. Street scene in David, the principal pearl market of the Province of Chiriqui, during the fishing season.

The word is judged to be of middle English origin, possibly from the Anglo-Saxon, but more probably from "pirula," the denominative Latin pirum, a pear.

Pearl growth is a most curious process of nature. The scientific description, "a nacreous concretion or separate mass of nacre of a hard, smooth, lustrous texture and a rounded, oval, pear-shaped, or irregular figure," gives no light as to the mysterious birth and development of a pearl. This is brought about by the deposit of some foreign substance into the growing wall of a shell (the wall is the beautiful mother-of-pearl), and the covering of the extraneous matter with the composition of this wall in the making. Any minute particle may thus, under favorable circumstances, develop into a most beautiful and valuable pearl. Sometimes it is a boring parasite that thus becomes encysted, or perhaps a grain of sand. Therefore, we know that the substance of a pearl is essentially the same as that which lines the interior of many shells, being, paradoxically, an imperfection of the mollusk.

The value qualities of the pearl are a perfect "skin" and a fine "orient," to use the idiom of jewelers. This means that it must be of a delicate texture, free from imperfections of any kind, of clear, nearly translucent white color with a subdued iridescent sheen; it must be round, oval, or pear shaped; irregularity means great diminution in value. There are, of course, many very valuable pearls that vary from the characteristic satiny, silvery bluish white color of the perfect gems. Pink, yellow, purple, gray, brown, black, and copper-colored specimens have been found, which, if otherwise perfect, assume an added value.

There are two families of pearls: The salt and the fresh water products. The former are alone found in the specific pearl oyster (*Meleogrina margaritiferus*) and the latter in the pearl mussel (*Unio margaritiferus*) so common in many rivers in the United States. The pearls of the ocean mollusks are, of course, the more valuable.

Pearl fishing is carried on in many parts of the world in the same manner that was in vogue from the time of the first divers. Natives of the pearl coasts sink themselves to the beds, tear off the oysters, and fill their canoes with the find. Those engaged in the work develop a remarkable ability for remaining under water long periods; but the rigors of the labor soon exhaust their energies, and pearl divers are always short lived. In some fishing grounds divers, furnished with the latest apparatus for submarine exploration, do the work, and this has been found the most successful method of exploiting the beds.

The before-mentioned process of pearl growth has led to the artificial propagation of the gems, and man has taken advantage of his knowledge in this matter to carefully introduce foreign substances into the lining of the pearl oyster or mussel, and thus assure the necessary foundation for the pearl. The mollusks are then returned to their native element until such time as it is judged that the mother-of-pearl has turned the grain into a gem of value.

Curiously enough, although this system of intensive pearl production is considered of modern application, it is known that the Chinese have been doing it since the thirteenth century. The priests go so far as to insert metal images of Buddha in living mussels, which become incrusted with nacre, and these they pass off as supernatural manifestations.

The most perfect pearl in existence is said to be one, known as "La Pellegrina," in the museum of Zosima, in Moscow, which gem is said to weigh 28 carats. It is perfectly round and of singular beauty. Another gem that adorns the Spanish crown is a beautiful enormous Mexican pearl, found near Loreto, which weighs 400 grains.

The black pearls of the Gulf of Lower California have been exported since the time of Cortez, when they yielded an immense revenue to the Crown of Spain. In 1715 it is said that 1,280 ounces of pearls were shipped to the Peninsula Kingdom that year. In the Gulf of Paria, which Columbus called the "Gulf of Pearls," and off the coast of Venezuela quantities of the gems have been found, and the region became so famous in this way that it received the name "pearl coast." From the island of Margarita, the Spanish word for pearl, a specimen of surpassing beauty and great weight (250 carats) was found in 1579, which became the property of King Philip. This pearl has been valued at from $30,000 to $100,000. The yearly value of the product of the beds in the immediate vicinity of this island off the Venezuelan coast is put at $600,000 to-day.

The Pearl Islands, lying in the Gulf of Panama, about 50 miles from the port of Balboa, are the main sources of supply for the Panama pearl trade. They have been assiduously exploited since 1632, when their yearly production was reported in pounds and the meanest natives were supposed to wear strings of the most beautiful and largest pearls. The continued advance in price of all varieties of these gems since 1880 has stimulated the trade and now pearl fishing is carried on in a most systematic method on the west coast from Mexico as far south as Guayaquil.

The business is carried on under concessions and has been profitable. In 1909, off the south coast of Chiriqui, Panama, a diver brought up a remarkable pearl, weighing 42 carats, about the size and shape of a partridge egg, greenish black at the base and becoming lighter toward the smaller end, which was light-steel color. It brought $5,000 in Paris. Nearly all the pearls caught in these waters are shipped directly to Paris, as the best pearl market, for they always fetch the highest price there. Sometimes, if a "matched" gem is brought to light, a pearl needed to form a uniform unit in a pearl necklace, its value may be increased 100 or even 500 per cent. The beds where these gems grow hold great potential riches for Panama, and with systematic planting should long be an asset for the Isthmian Republic.

RAILWAYS AND INTERIOR WATERWAYS.

The railroad across the Isthmus between Colon and Panama, 48 miles in length, with a branch line 3 miles in length to Balboa, the Pacific entrance to the canal, is the most important transportation route of the Republic. There is, besides this, a system developed in the territory adjacent to Bocas del Toro principally for the banana industry, but carrying also publicly both freight and passengers, which radiates from Almirante, with 151 miles (243 kilometers) of main-line narrow-gauge track. The total extent of lines in operation is therefore 325 kilometers (202 miles).

The Government authorized the President to call for bids, to be opened June 30, 1911, for the construction of a narrow-gauge railway, to be known as the Panama-David Railway, the total distance to be approximately 361 miles (581 kilometers), and following about the survey of the Intercontinental Railway Commission in 1893. Another concession permits the construction of a railway in the Darien region, east of the canal.

Several of the rivers of Panama might be navigable were it not that the tropical rains increase the volume so enormously that transportation on them is at that time difficult and dangerous. The Tuyra is navigable for small vessels for about 100 miles; the Bayamo, the Cocle, Calebebora, Tarire, and Los Indios are all navigable for small craft from 20 to 75 miles. The Chagres is now practically absorbed by the canal.

THE PRESS OF PANAMA.

Panama, having been originally a part of the South American subdivision known as Colombia, derived its earliest literary guidance from that country. Lying, however, as the crossroads between the Old World and the New, Peru and Mexico, and being therefore the meeting point for busy and well-informed travelers, Panama was always eager for news, although it is more than probable that it was distributed to them in papers brought to the Isthmus on ships from abroad, rather than by means of any local periodical.

The first periodical publication of which record has been found in the Columbus Memorial Library is the Miscelánea del Istmo, with the date of 1822. In 1824 the Gazeta del Istmo and the Gazeta del Departamento del Istmo appeared, but these latter were in all likelihood but dry official publications. In 1843 and 1844 the Cartilla Popular was issued, and in 1844, the Movimiento. This was shortly after the return of the Province (Department) of Panama to Colombia, from which it had seceded. The Isthmus was dormant, however, and could not maintain a newspaper. A spark like that of the discovery of gold in California was needed to bring Panama again into the public eye.

In 1849, when the Isthmus was invaded, the first real newspaper was published, and in English. This was the Star, beginning February 24, 1849. It has been in existence ever since then; but when, in 1852, it absorbed the Herald, a rival sheet started later, the name was changed to the Star and Herald, which has been since then retained. For a long time it was printed in both English and Spanish, to which for a while French was added. It now has only the English dress. On almost the same date, a Spanish paper, El Panameño, appeared, but it ceased long ago. This was the fate of many others issued in either Panama city or in Colon. In 1889 the Telegram, still alive, came out in Colon.

In the city of Panama there are 15 newspapers to-day, and in Colon 4; Bocas del Toro has 1. The majority of them are in Spanish, or have sections giving the news in both Spanish and English, but the more technical publications devoted to scientific or literary matters are Spanish. The circulation extends to many parts of the Isthmus while several of the best-known papers have numerous subscribers up and down the east and west coasts, and in the United States. As might be supposed, the actual circulation can not be very heavy, but all the papers are read with great interest, as they are newsy and attractive. The larger papers measure about 16 by 22 inches; they have usually eight pages, and six or seven columns to a page; the smaller papers are scarcely more than half that size. The column inch is the standard unit for advertising, and this costs, each insertion, about 7 cents (gold) for stereotyped plates or 20 cents (gold) for original matter. Of course special rates are allowed for time contracts.

ANCIENT TOWER OF THE OLD CITY OF PANAMA.

This old tower, overgrown with vines and vegetation, marks the site of the original city of Panama, founded in 1515, 5 miles eastward from the present city. It flourished until 1671, when it was wantonly destroyed by Morgan, the buccaneer.

PARAGUAY

The Republic of Paraguay, one of the two inland countries of South America, has an area of 171,815 square miles, and a population (1910, estimated) of 800,000, or 4.6 per square mile.

With a subtropical climate considerably modified and made healthful by several mountain chains and an extensive hydrographic system, most of the products of the Tropical and Temperate Zones are successfully cultivated. The extensive plain of the Gran Chaco affords excellent pasturage for cattle, and the slopes of the mountains of the country are covered with luxuriant forests, where many useful woods and medicinal plants are to be found.

Beef products, the valuable quebracho wood, and yerba mate or Paraguay tea, are the principal articles of export. Lapacho, curupaz, and cedar are valuable woods found in considerable quantities, and oranges, tobacco, coffee, rice, cotton, mandioca, and sugar are grown and exported.

COAT OF ARMS OF PARAGUAY.

The constitution of Paraguay provides for a republican form of government, with the usual division of legislative, executive, and judicial authority.

The National Congress is composed of the Senate and Chamber of Deputies, both elected by direct popular vote, all citizens over 18 years of age being entitled to suffrage. Senators are elected for six years on the basis of 1 for every 12,000 inhabitants, or fraction over 8,000; deputies are elected for four years at the rate of 1 for every 6,000 inhabitants, or fraction exceeding 3,000. The Senate is renewed by thirds and the Chamber of Deputies by halves every two years. Congress meets annually on April 1 and continues in session until August 31, but extraordinary sessions may be called at any time by the President or on motion of four deputies and two senators.

The President and Vice President are elected by electors chosen for that purpose, for a term of four years. The salary of the President is $7,000 per annum.

The former President of the Senate, Sr. Liberato Rojas, became Provisional President of the Republic on July 6, 1911. Up to the time of going to press, the cabinet, consisting of the following five portfolios, had not been announced:

Minister of the Interior.
Minister of the Treasury.

Minister of War.
Minister of Foreign Relations.
Minister of Justice, Religion, and Public Instruction.

The Department of the Interior (Ministerio del Interior) administers the departments and municipalities, and has charge of the general elections, the police and fire departments, post-office and telegraph systems, railways and waterways, roads and bridges, and all matters pertaining to public health and sanitation as well as public buildings and works. The national bureau of statistics, the register of deeds, and titles, and the national department of engineers, are under its supervision.

NATIONAL BUILDING, ASUNCION, PARAGUAY.

The Department of the Treasury (Ministerio de Hacienda) administers the finances, collects all revenues and directs the disbursements thereof, prepares the annual budget and has charge of the customhouses. The national accounting office, the national bank, the agricultural bank, the conversion office, the patent office, and the government printing office are also under its control.

The Department of War (Ministerio de Guerra) has charge of the recruiting and training of the standing army as well as of the national guard. The naval academy and other schools and institutions for the training of army officers and men are under its jurisdiction.

The national council of agriculture and industries, consisting of a number of private citizens, appointed by the President to promote agriculture and industries in the Republic, and the national society of agriculture, a private association formed for the same purpose, are also supervised by this department.

The Department of Foreign Relations (Ministerio de Relaciones Exteriores), aside from the supervision and control of the diplomatic and consular corps, is intrusted with the settlement of international boundary disputes and the adjudication of similar matters with foreign powers. It also has charge of immigration and colonization through a bureau which attends to securing immigrants for the various agricultural colonies scattered throughout the Republic.

The Department of Justice, Worship, and Public Instruction (Ministerio de Justicia, Culto y Instrucción Pública) has, under its respective sections, the administration of justice and all matters pertaining thereto, including the penal institutions, and supervision over the Roman Catholic churches and clergy. All public and private schools as well as special institutions, such as the National University, the School of Agriculture, the National Library, the National Museum, the School of Arts and Crafts, and the Industrial School, as well as the civil register for the registration of births, deaths, marriages, etc., and the preparation of vital statistics, are under its charge.

The judiciary includes a superior court, two courts of appeals, and a number of minor tribunals. The superior court is composed of three justices, appointed by the President, with the consent of the Senate, for a term of four years.

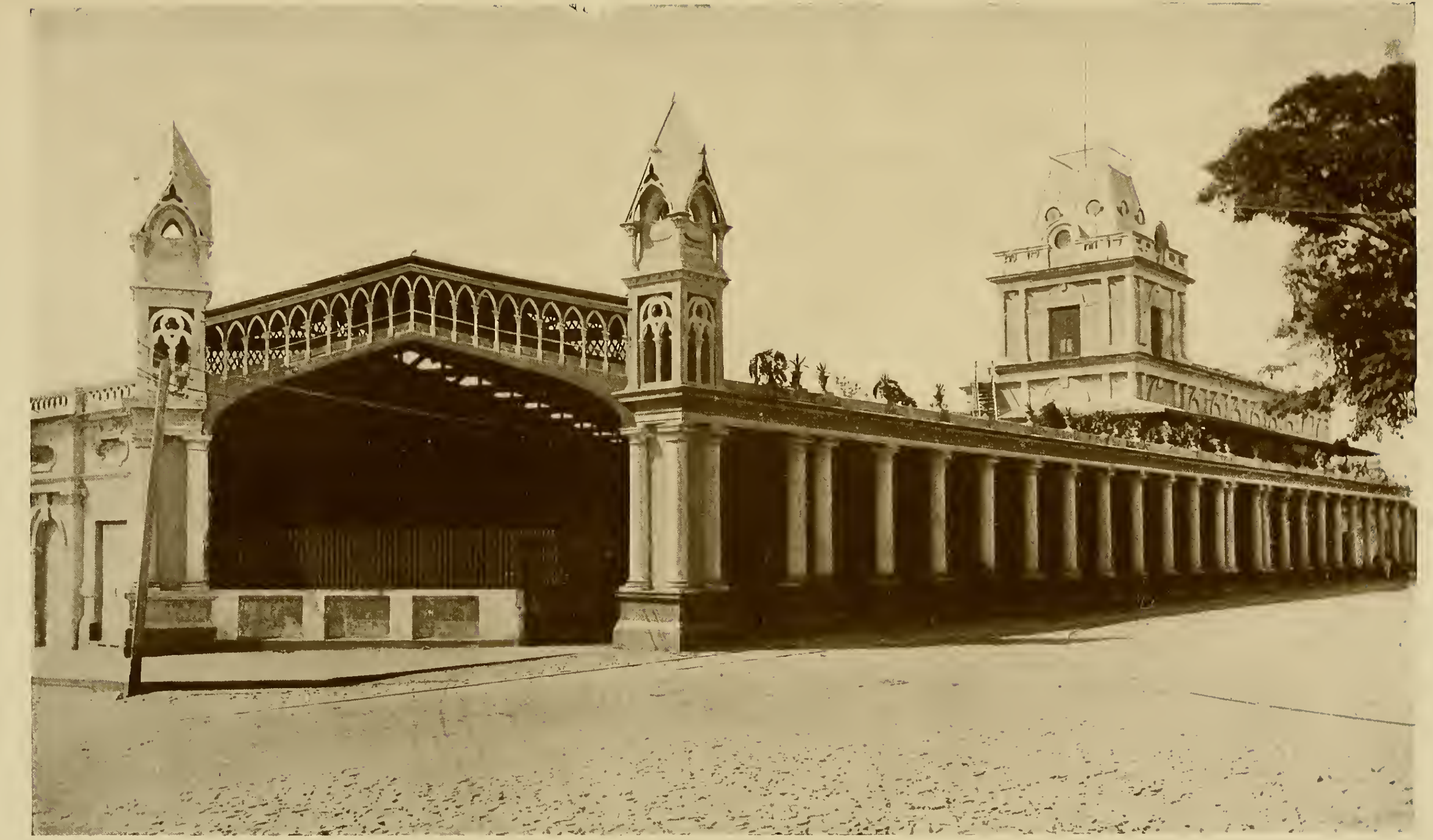
The standing army is composed of 2,600 officers and men. There is also a national guard, all citizens of the Republic between their twentieth and thirty-fifth year being liable to military service. The navy consists of a small dispatch vessel and two transports.

There are about 385 post offices in the country, the total number of domestic and foreign postal and parcel pieces handled being about 6,000,000. There are about 2,000 miles of telegraph lines, offices being established at all the principal towns from Asuncion southward, and the service is to be extended in the north toward the Brazilian boundary line.

For administrative purposes the Republic is divided into 84 departments, each under a political chief appointed by the President for a term of four years. These departments are divided into municipalities, each governed by an intendente or mayor and municipal council elected by direct vote of the people. For electoral purposes a division of the country is made into 24 electoral districts.

PARAGUAY IN 1910.

During the year the foreign relations of the Republic remained on a footing of peace and accord. The important question of the boundary dispute between Bolivia and Paraguay approached a settlement with a spirit of justice animating both countries, and the



SPACIOUS STATION OF THE CENTRAL RAILROAD AT ASUNCION, PARAGUAY.

intercourse with that neighboring Republic is advancing in consequence. An extradition treaty with Austria-Hungary was exchanged on August 6, and steps were taken to prepare for similar treaties between Paraguay and Great Britain and Italy, while a general treaty of arbitration with Brazil was practically ready to sign at the end of the year. Paraguay was represented at many international congresses, the Pan American Conference at Buenos Aires among them, and the Government has made serious effort to take part in the world's movements which is so great a characteristic of the first decade of the new century. In this regard, that is, the extension of international relations, it is worthy of remark that Paraguay has welcomed foreign diplomatic representatives, and is ambitious to accredit new legations to friendly Governments where they can be of service to the nation.

Financial conditions improved. The conversion fund, for maintaining a parity between Paraguayan paper and gold (the unit of the dollar being the Argentine peso, equal to $0.965), has been increased. Payment on the foreign debt, originating in the loans of 1871–72, continued with strict punctuality, and one debt, that contracted with the Bank of the Republic (Asuncion) for a sum advanced by the French Bank of the River Plate, was arranged to be canceled.

The total foreign commerce surpassed that of the year 1909, but as in that year also the imports again exceeded the exports, which might be taken to indicate that the balance of trade was against the Republic, but it must be taken into consideration that in the imports are included over $1,000,000 worth of rolling stock and material for the railway extension, so that, as a matter of actual routine commerce, the showing is favorable.

This railway extension for which these purchases are to be applied refers particularly to the line which connected Asuncion, the capital of the Republic, with the interior, but which has recently been completed to the southern frontier at Villa Encarnacion, on the Alto Parana River. Thus railway communication has been established during the year between Buenos Aires and Asuncion, which will add greatly to the commercial facilities of the country, as well as encourage immigration and permanent improvement of this fertile portion of South America. Another extension actively studied by engineers during 1910 was what is called the Transparaguayan Railway, which is to be built between Asuncion across Paraguay and Brazil to the Atlantic seaport of São Francisco, in Brazil. Capital for this railway has been supplied and work will soon be pushed.

Many projects for modernizing conditions within the country were taken up in 1910, and only await congressional action. A national census to include agricultural statistics, a survey of the country, and the tabulation of commercial and industrial matters were under discussion. Education was carefully fostered, and several students were kept abroad, both in Europe and the United States, to acquire such training as should benefit the schools on their return. Sanitary conditions have remained satisfactory, but changes in health offices were made for the sake of economy.

FINANCE.

There are no official reports of the receipts and expenditures of 1910.

The budget estimates for the year were as follows:

REVENUES.

Gold revenues:	Pesos gold.
Import duties	1,076,000
Export duties	389,500
Wharf dues	170,000
Warehouse dues	23,500
Transit dues on foreign produce	44,000
Consular fees	17,000
Timber tax	45,000
Sundries	6,000
Total	1,771,000
Paper revenues:	Pesos paper.
Tax on internal consumption	825,000
Stamps and stamped paper	1,668,500
Succession duties	112,500
Posts	445,000
Telegraphs	518,000
Land tax	1,942,000
Land tax fines	162,000
Sundries	563,000
Total	6,236,000

EXPENDITURES.

	Pesos gold.
Legislature	62,700
Department of Interior	539,100
Department of Foreign Affairs	76,730
Department of Finance	251,025
Department of Public Debt	650,355
Department of Justice and Worship	468,025
Department of Public Instruction, War, and Marine	597,965
Total	2,645,900

The gold peso is worth about 97 cents United States gold and the paper peso at the end of the year 1910 a little over 7 cents. Converted into U. S. gold on this basis, the estimated revenues were $2,154,390 and the estimated expenditures $2,566,523.

In a report of Mr. G. W. Griffith, British consul at Asuncion, presented to Parliament October, 1910, are given the figures of actual revenues and expenditures for the year 1909 and the two preceding years. These are the latest figures of actual receipts and expenditures available.

	1907	1908	1909
Revenues:			
Import dues	£376,100	£407,930	£213,851
Export dues	62,080	65,000	68,127
Loading and discharging dues	28,350	30,920	23,897
Warehouse dues	2,540	4,992	4,209
Loading and discharging dues on yerba mate	7,700	9,660	9,785
Export duty on timber	8,109	15,030	10,382
Sundries	18,400	20,430	17,998
Internal tax	24,960	27,620	12,093
Consular fees	4,360	4,210	3,272
Stamps and stamped paper	16,380	24,650	24,508
Succession duties	3,180	4,220	1,656
Post office	3,430	4,700	6,250
Telegraphs	7,930	8,400	7,621
Direct tax	33,645	31,970	28,520
Sundries	14,026	13,400	11,747
Total	611,190	673,132	443,916

FOREIGN DEBT.

The amount of the sterling debt as recognized by the White-Acedal agreement of August, 1885, was £994,600. Up to January 1, 1911, there has been redeemed of this debt £200,550, leaving the amount outstanding at the end of the year 1910 at £749,050.

In addition to the sterling loan there exists the loan of the French Rio de la Plata Bank, which originally amounted to 1,101,116 pesos gold. This debt has been reduced to about 750,000 pesos for which the bank holds security in part.

FOREIGN COMMERCE.

The total foreign trade of Paraguay for the year 1910 according to a report of United States Consul Cornelius Ferris at Asuncion amounted to $9,794,334, of which imports were $5,374,837 and exports $4,419,497. The figures for the preceding year were imports $3,655,366, exports $4,957,055, total $8,612,421. This shows an increase in imports of $1,719,471, a loss in exports of $537,558, a total net increase of $1,181,913.

Detail figures for the commerce of Paraguay for 1910 are not available yet.

IMPORTS.

The imports for the three years, 1907, 1908, and 1909, by countries were as follows:

Countries.	1907	1908	1909
United Kingdom	$1,390,890	$856,333	$1,244,533
Germany	1,498,005	1,192,619	733,082
Argentina	723,411	766,519	568,084
Italy	490,597	289,719	254,330
France	674,275	364,309	234,898
United States	223,451	222,763	202,766
Spain	351,785	210,559	178,581
Belgium	88,027	49,489	74,870
Austria	....	8,700	60,067
Uruguay	43,824	40,981	44,796
All other countries	104,790	70,962	59,359
Total	5,589,055	4,072,953	3,655,366

The value of imports by articles in 1909 is shown in the following table:

Textiles	$1,033,682
Food stuffs	866,615
Nondutiable articles (including machinery)	771,683
Hardware	296,260
Beverages	220,973
Haberdashery and notions	116,503

ASUNCION, CAPITAL OF PARAGUAY, ONE OF THE OLDEST MUNICIPALITIES IN THE NEW WORLD.

Drugs	$49, 697
Arms and ammunition	39, 274
Hats	37, 023
Perfumery	27, 999
Books	21, 031
Wearing apparel	19, 198
Leather	18, 155
Patent medicines	14, 860
Crockery	13, 997
Musical instruments	7, 948
Boots and shoes	7, 895
Lamps and chandeliers	6, 501
Furniture	5, 992
Drugs	5, 255
Jewelry and watches	2, 194
Saddlery	2, 186
Miscellaneous	70, 445
Total	3, 655, 366

Textiles: From United Kingdom, Germany, and Italy.
Foodstuffs: From United Kingdom, Germany, Argentina, and United States.
Hardware: From Germany, United Kingdom, and United States.
Beverages: From Spain, Italy, and France.
Ready-made clothing: From Germany, France, United Kingdom, and Spain.
Drugs and Chemicals: From Germany, France, and United Kingdom.
Firearms: From Germany, United Kingdom, France, and United States.
Perfumery: From France, Germany, and United Kingdom.
Stationery: From Germany, Argentina, France, United Kingdom, and Spain.
Fancy goods: From United Kingdom, Germany, France, and Italy.
Leather, manufactures: From Germany, France, and United States.
Boots and shoes: From Germany, Argentina, and Italy.
China and earthen ware: From Germany and United Kingdom.
Musical instruments: From Germany, Spain, and France.
Furniture: Nearly all from Germany, some United States.
Watches, clocks and jewelry: From France and Germany.

EXPORTS.

The exports by countries for the years 1908 and 1909 were:

Countries.	1908	1909	Countries.	1908	1909
Argentina	$2,000,381	$2,475,951	Netherlands		$9,373
Germany	971,799	1,360,708	United States	$1,434	5,539
Uruguay	548,193	690,090	Bolivia	1,773	4,995
Brazil	30,668	217,955	United Kingdom		2,052
Spain	28,215	98,669	Italy	15,455	
Belgium	182,397	70,992	Other countries	5,873	875
France	80,906	43,628			
Switzerland		11,987	Total	3,867,094	4,992,814

The figures for 1909 in the table above and in the following table are from the report of Mr. G. W. Griffith, British consul of Asuncion, values in pounds sterling being converted into United States gold.

The value of the principal articles exported in 1909 was:

Hides	$1, 134, 606
Quebracho extract	634, 186
Yerba maté (Paraguay tea)	553, 629

Timber	$979, 740
Tobacco	534, 085
Dried meat	89, 701
Oranges	258, 517
Petit grain	89, 866
Horns	65, 372

PRODUCTS AND INDUSTRIES.

The resources of the Republic at present are confined mostly to the production of raw material, the industries being few in number.

The production of the oil of petit grain extracted from the leaves of a native orange tree is being conducted on an increasing scale, the principal distilling plants being located about 50 miles from Asuncion, in the orange-growing district of Yaguaron. It is estimated that 300 to 350 pounds of orange leaves yield about 1 pound of essence, this product being used as a basis for various perfumes and in the manufacture of flavoring extracts. The preparation of the oil for trade purposes constitutes a lucrative industry in Paraguay. The price in Asuncion ranges from $6 to $7 a kilogram.

The climate and soil of the Republic are suited for all tropical growths. Indigo and sugar cane yield easily to cultivation, and the forests contain many different grades of cabinet and dye woods, resins, and balsams, while a native fiber plant known as mapajo is used by the Indians in the manufacture of a coarse textile for garments.

LEAVES OF THE ILEX PARAGUAYENSIS.

Their color is a bright green, and, seen at a distance, the shape of the tree and the character of these leaves make a picture very similar to the more familiar orange tree.

Tobacco is one of the leading crops. Special attention is being given to its cultivation, and it is growing in importance as an article of export. The soil and climate of the country has been found to be suited to raising this article from the best seed secured in Cuba, with results which stand the test of competition in the European markets.

The possibilities of the Republic as a cotton producer are immense, the rich and fertile soil assuring a large yield per acre. As early as 1863 there were estimated to be 58,000,000 cotton plants under cultivation in the country. The native cotton has a long, silky fiber and enjoys excellent reputation in Germany, England, and Holland on account of its fine weaving qualities.

An industry of considerable importance in the country is lace making. The variety and beauty of the patterns woven have attracted considerable attention, while the delicate quality of the work has given the Paraguayan product a place of eminence in the world's production.

The live-stock industry in the Republic is constantly increasing, many cattlemen from the Argentine Republic and Brazil having located in the country in recent years. The exports of meats and jerked beef are well known in foreign markets, principally Brazil, Cuba, and Spain, and the hides exported to Europe command good prices. It is estimated that there are over 5,000,000 cattle of all kinds in the Republic.

There are two saladeros or beef-curing establishments in Paraguay, both located on the river north of Asuncion. Each of these plants kills from June to October about 18,000 head of cattle, the product being the jerked beef which figures largely in Paraguayan exports.

The tanneries in the Republic give their attention chiefly to sole leather, but one at Asuncion turns out a limited line of calf, kid, saddle, and harness leather.

Various minerals are found in the Republic, such as quartz, agate, opals, kaolin, ron, manganese, copper, and mercury, but the mining industry has been little developed.

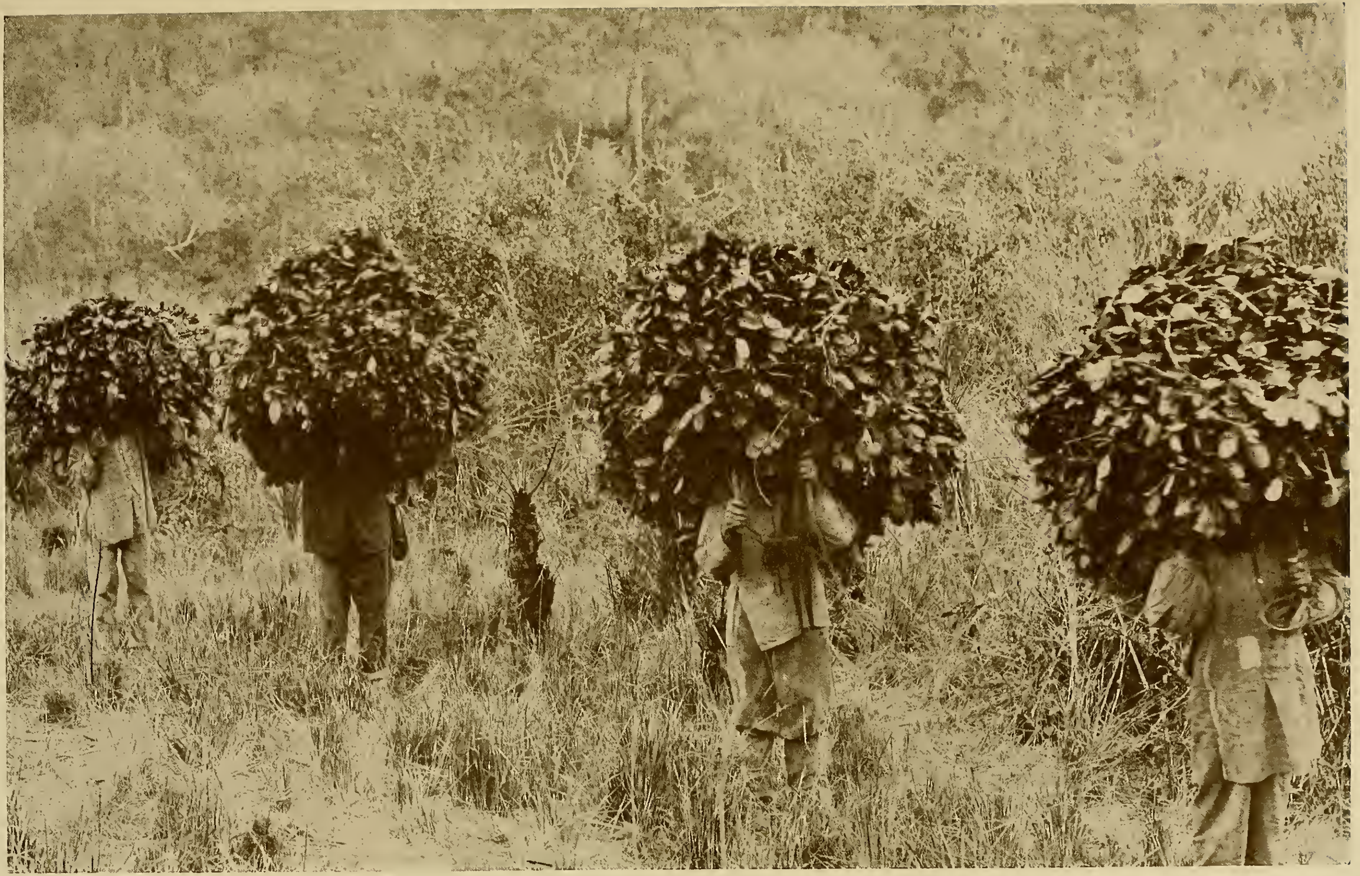
The principal crop is mate, of which about 17,600,000 pounds are treated annually. About one-half of this amount is exported. The plant grows wild in immense tracts in the northern and eastern sections of the Republic, being found most abundantly in the districts of Panadero, Igatimi, San Pedro, Villa Concepcion, Caaguazu, Jesus, and Tacurupucu.

YERBA MATE (or Herva matte, as the same article is spelled in Brazilian Portuguese) is altogether indigenous to a well-defined area of South America. The aboriginal Indians of the basin of the Rio de la Plata, the Guarani, knew and used the plant long before the invasion of their country by the Spaniards. When these Indians were subdued, especially by the Jesuit missionaries, and this movement is of itself a fascinating chapter in the history of South America, they were found to be using a drink made of a plant that grew wild and abundant over the subtropical regions in which they lived.

Caá was the name given to this plant by the Guarani. Caá means simply weed, and the Europeans, translating literally, called the plant yerba, a word similar to the English "herb," with which it is etymologically allied. Caà guazù, the still more specific Guarani term, means "big or splendid weed." The mate is the dried gourd, hollowed out, with an aperture where the stem used to be, into which the crushed leaves are placed and into which the boiled water is poured; from the mate the decoction is sucked through a hollow tube, called a bombilla (little pump), at first and at times even now made of a reed or bone, but usually fashioned from metal with a perforated, spoon-shaped expansion at the extremity inserted into the mate. By habit the container implied also the thing contained, so that mate is also what is sucked from the mate in which it is prepared.

Yerba mate is, therefore, directly translated, only a drink made out of an herb. The word mate is sometimes applied to plants in Cuba and Mexico of the leguminous family, with no recognized connection. Botanically the plant from which the drink is made is a holly, ilex, a genus of trees belonging to the order ilicineæ. The holm oak is embraced in this order. Others of the genus ilex grow in many parts of the world, preferring a temperate or a subtropical climate.

The *Ilex paraguayensis* is the South American holly, growing spontaneously in the four Brazilian States of Parana, Santa Catherina, Rio Grande do Sul, and Matto Grosso; in the northeastern region of Argentina, and especially in all the eastern and central parts of Paraguay. It is an evergreen tree or shrub about 12 to 26 feet (4 to 8 meters) high, very bushy and beautiful, from a distance resembling an orange tree. It has no prickles or spines. The leaves are a bright green, the yellowish flowers being insignificant, and the tiny berries are a purplish black. Some of the specimens are better than others, the one preferred as giving the best quality of tea leaves having a very small leaf of a dark-green shade. The fruit is attached by a short stalk to the branches; it contains a solt pulp with hard seeds, which, if left exposed for a few days, become so



CARRYING BRANCHES OF YERBA.

The yerbateros are hard working, and stick to their tasks with admirable endurance. They enjoy themselves, however, and occasionally have competitive trials of strength among themselves over the weight of the loads they can carry. The cultivation of yerba maté ranks high in the value of exports from Paraguay.

hard and dry that they can be cut only with sharp instruments. The Indians originally did nothing but gather the leaves from the trees in the forest, depending upon the natural source for additions to their supply, but the Jesuits devised a means to replenish the trees by cultivating them from the seed—a method for a long time lost to the agriculturist, as the holy fathers had kept the secret to themselves. Recently, however, it has been found that the provision of nature by which the plant was propagated was chiefly through the digestive tract of birds, where the intestinal juices softened the seed's shell so that it would the more easily germinate.

YERBA MATÉ READY FOR TRANSPORT.

The yerba after the drying and thrashing processes, is compressed into skins or bags, weighing about 200 pounds. These are then carted, or more frequently carried on mule back, 15 or more leagues (35 or more miles) to the nearest point of shipment. Good roads through the woods would reduce the labor and cost of the tea very considerably.

This process of maceration has been copied by chemical means. Seeds properly treated can be then planted and will grow young sprouts. Thus the modern gardener starts his orchard (for orchard means weed yard). Although almost all yerba mate is still taken from the immense natural forests of the region mentioned, plantations have been successfully laid out and crops of leaves have recently been gathered with commercially profitable results.

Collecting the leaves is nevertheless, as a rule, conducted in the same way that was characteristic of the industry centuries ago. It is a native method differing little in its details, either in Brazil, in Argentina, or Paraguay.

The yerba gatherer carries only a small ax, the simplest of provisions, and sufficient water. His desire is to find the plants as near as possible to the camp, so as to accomplish results immediately. The trees are of all sizes, from a shrub to the height of a full-grown orange tree, but the smaller the plant the better is the tea made from its leaves. They grow irregularly, sometimes only a few to an acre, scattered throughout the general forest, or again they may be found in numerous clumps, from which a bounteous harvest is easily obtained.

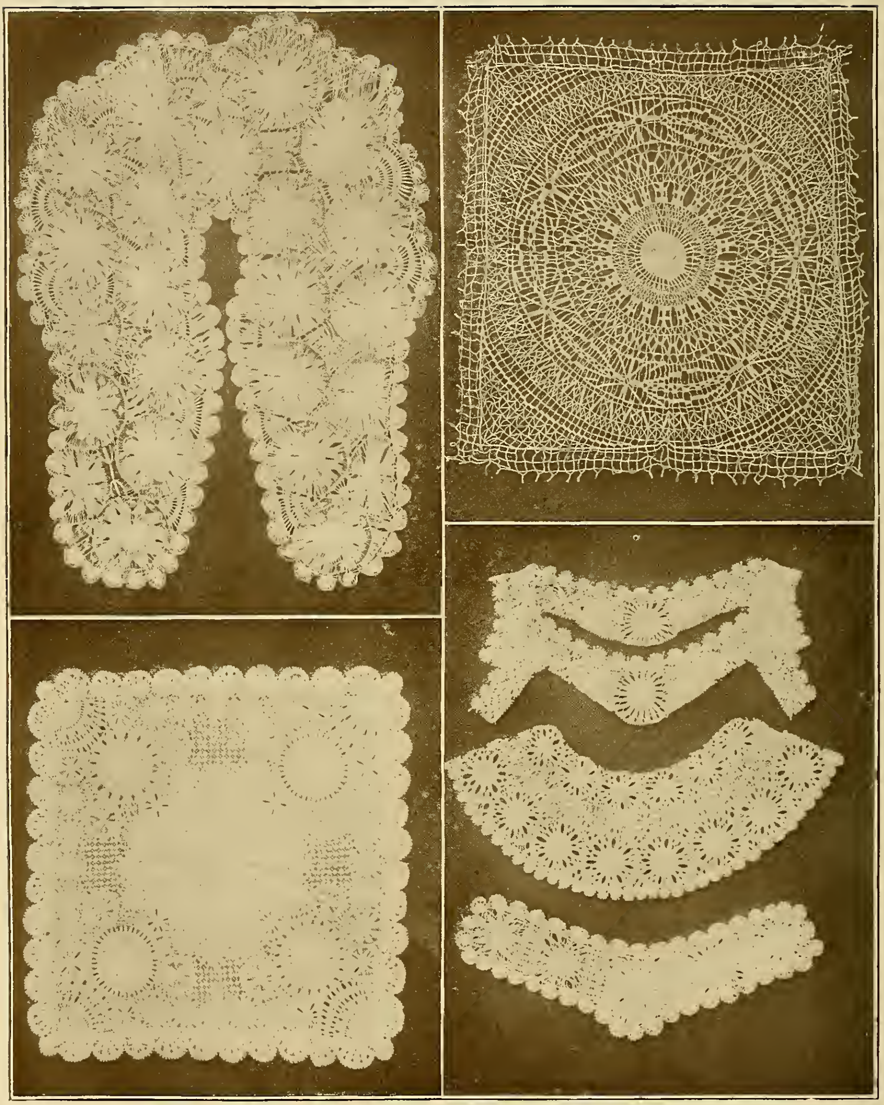
When cutting begins it is continued until a mountain of branches is collected and piled up in the form of a haystack. The peons then fill their ponchos (large capes with a central aperture through which the head is thrust) and hurry away with their loads. Having deposited these burdens within the colony they return for another, and so on until they have cleared all the branches and leaves cut during the day.

Then the smoking, or as it is called in more elegant language, the torrefaction, begins and lasts for about three days, the native skill, based to a great extent upon tradition, being trusted to decide the proper moment when the leaves have reached the exact degree of dryness for preparation into powder. Twenty-four hours is probably the minimum time for exposing the leaves to heat.

GROUP OF LACE MAKERS, SHOWING THE FRAMES OR "BASTIDORES" ON WHICH THE LACE IS MADE.

Planting needs particular care. Yerba trees demand abundant shade at first, and therefore forest land must be selected in which to sow the seed. These are allowed to sprout in apparent wildness, beneath the shade-giving trees; gradually the roof of branches and vines is thinned away, as the yerba trees acquire strength, until they are left exposed by themselves to the full air and light. Good results have been obtained, too, by using the rapidly growing castor-oil shrub, which affords protection and takes the place of the forest, as long as it is needed. One change is thus noteworthy: In the forest the shrub growing wild becomes drawn upward in order to reach the light and air; in the more open plantation it becomes quite bushy. This is an advantage in favor of cultivation.

Another gain for scientific agriculture of this kind is the fact that the yerba tree can be accustomed to different soils and to a lesser degree of moisture. Left by nature



ÑANDUTI LACEWORK.

Lace making in Paraguay is now recognized as one of its staple industries. The artistic patterns and delicate work have given the product a position of importance.

to select its own habitat, the yerba prefers the low shores of rivers and a bed in which water is supplied with superfluous liberality. But if from earliest growth it is made accustomed to a fairly dry situation, in ground well drained by nature or art, it flourishes admirably there and needs no watering.

The immense forests in southern Brazil, Paraguay, and the Argentine Mesopotamia (chiefly the Territory of Misiones) furnish the world's supply of the yerba, but cultivation is beginning to add its proportion, and it is more than probable that, within a few years, especially since the increased popularity of this drink and the determined efforts made to give it a foreign vogue, there will be a steady growth in the cultivation of Paraguay tea.

What is Paraguay tea? For this is as logical a name as any. The word mate is general, in Spanish and Portuguese, and can not be displaced, but in English it does not convey a clear idea of the drink itself, and that is the only distinctive feature about the yerba.

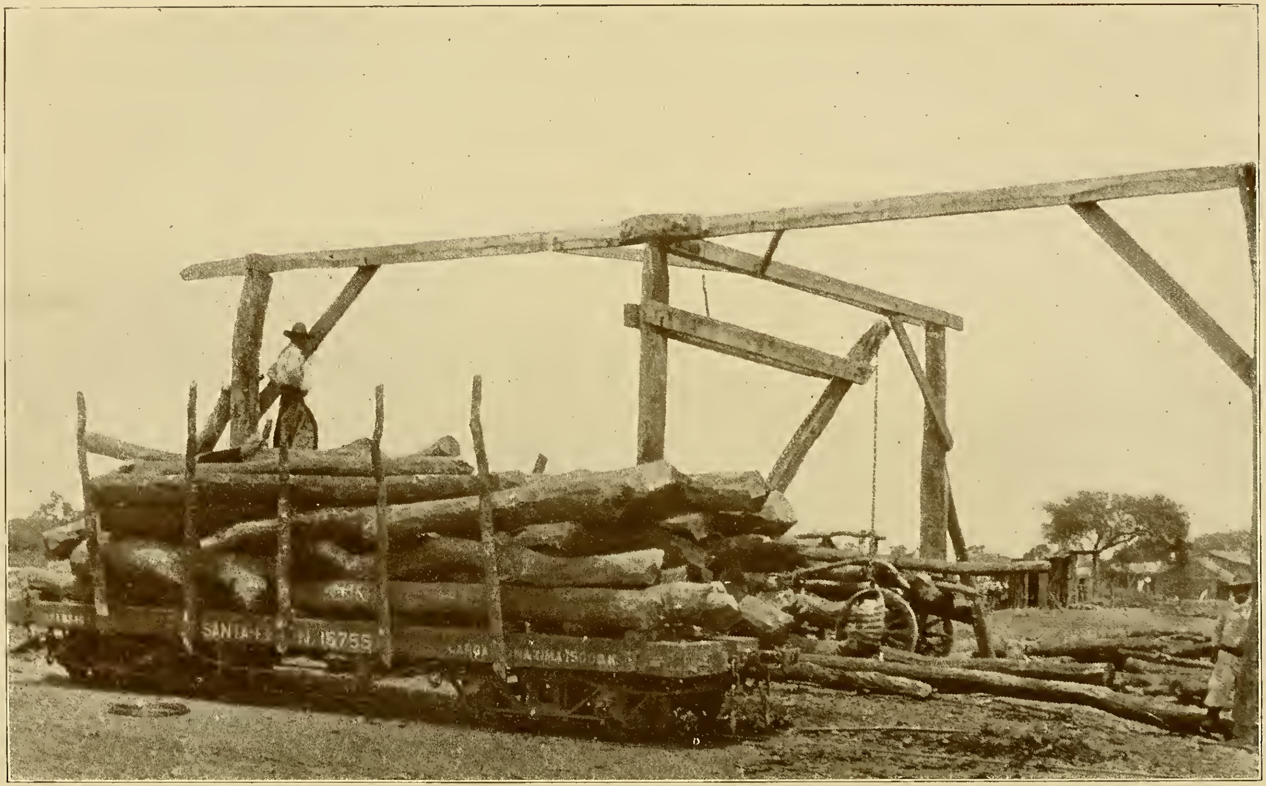
The drink called Paraguay tea is made from yerba mate. It is prepared by placing in a hollowed receptacle called a mate two or three spoonfuls of the powdered leaves, with sugar or lemon or other condiment, and by pouring boiling water upon it. After steeping a few moments it is sucked through a tube called a bombilla, which admits the liquid but keeps out the powdered tea. The process may be repeated ad libitum. The natives, as well as those habituated to the tea, drink the decoction at all hours of the day and night, and from it comes, in fact, practically all the liquid nourishment required by the body for its physical well-being.

A reasonable and quite impartial estimate places the number of drinkers of Paraguay tea at about 10,000,000 persons in South America, and it is stated, moreover, that the supply frequently falls short of the demand. The yearly consumption per capita of this yerba is given as being in Chile, 51 kilograms (112½ pounds); in Bolivia, 2.50 kilograms (4½ pounds); in Argentina, 9 kilograms (20 pounds); in Uruguay, 10.02 kilograms (22 pounds); in Paraguay, 15.73 kilograms (34 pounds); and even in the Brazilian State of Parana, from which come great quantities of mate, although it is near the coffee-growing center of the world, the annual per capita consumption is 20 kilograms (44 pounds), a demonstration of the profound influence the habit makes upon the European immigrant even from the northern portion of that continent, for Paraguay has a relatively large proportion of Germans and Poles among its colonists.

With tea and coffee the Paraguayan yerba mate has much in common. Chemical analysis shows that, in addition, of course, to the essential oils, chlorophyl, resins, and other vegetable ingredients, it contains both tannin and caffein. Of tannin the proportion is decidedly less than that estimable in both green and black teas and falls short of the amount in coffee; of the other alcaloid, known as caffein, thein, or in this case sometimes given the name matein, the proportion is less than in the teas, but approximates the amount contained in the coffees. This amount of caffein is given in various analyses as from 1 to 2.50 per cent, according to the leaves furnished.

The caffein, then, is the active principle that gives to Paraguay tea its sustaining quality, and the small quantity present in it accounts for its unquestioned virtues. "The slight amount of caffein in Paraguay tea, and especially the almost infinitesimal amount of essential oils compared with tea and coffee, explain fully the dietetic and physiologic advantages of the drink." It does not irritate but it soothes the nervous system, and this accounts for its historic and contemporary use among the Indians, plainsmen, cowboys, natives, and European colonists.

The tea can be drunk either cold or hot. Hot, it can grace the tea table and be served in all the ways so well known in the consumption of Japan tea. Cold, it offers a fine drink for excursions, for picnics, or the thousand and one requirements of daily life. It might even add one more to the attractive offerings of the American soda fountain, for the traveler who knows his South America can well imagine many a drink more harmful than Paraguay tea and no more attractive. It is reported that in



LOADING QUEBRACHO LOGS ON A LOCAL RAILWAY.

Quebracho industrial companies have introduced all modern improvements in handling their product and have laid small railways into the forest, on which logs are carried to the mill and thence to the trunk lines of Paraguay and Argentina. Many logs are shipped to the United States, where the tannin is extracted.

England a company has been formed to extend the use of mate; returning Italian and German settlers in the River Plate region insist on importing for their own use their beloved tea, and soldiers in European armies, even if they have previously had no practical experience with the drink, take kindly to it as soon as they note its cheapness and healthfulness.

The increase in amount gathered is a fair test of the hold the tea has in the affection of its consumers. In 1726 the harvest report was no more than 625,000 kilograms (1,378,000 pounds) for all of South America; in 1905 it had reached the total of 100,000,000 kilograms (2,246,000 pounds); in 1909 the estimated production was 105,000,000 kilograms (2,314,850 pounds). Argentina, Bolivia, and Chile import the powdered leaves, Paraguay and Brazil export, although both the latter countries are also enormous consumers, and both the former might cultivate the tree. In fact, Argentina has already taken this step, and the plantations are promising remarkable success. France is the European country importing most yerba, followed by Germany, Italy, Spain, and Portugal, and it is commercially on sale in England. It must not be said that the United States is the last to appreciate the excellence of the Paraguay tea.

Among the forest products of value are the curupay tree furnishing a hard wood suitable for railroad ties and construction work, and some tannin. The forests of the Republic have both subtropical timber and certain species that are characteristic of the temperate zone, but the best known recources of this country's flora is the quebracho tree, which is now one of the principal exports, and which is playing an important part in the world's industries.

QUEBRACHO is a contraction of the colloquial Spanish and Portuguese term quiebra-hacha, originally applied to many trees in Latin America. It means "ax breaker," and the character of the timber is implied in this meaning.

Species of the quebracho tree are to be found growing in the Chaco country of Paraguay, Brazil, and northern Argentine Republic, the red colored being the one containing tannin used in the manufacture of the extract so valuable in the tanning of hides. The wood itself is one of the hardest known species and furnishes material for railway ties for a large part of South America. It is used also for furniture. Every portion of the tree is utilized for the extraction of tannin. In Paraguay and the Argentine Republic the wood is a large item of national wealth, the land bearing the trees selling from $3,000 upward per square league. During one year Paraguay manufactures many thousands tons of extract, and the United States imported in 1910 over $4,000,000 worth of quebracho for tanning and other purposes. Much of this wood comes from the Chaco region of South America, which belongs to both Argentina and Paraguay, but the larger area is part of the latter Republic, and it grows wild in all parts. Gathering quebracho is now a recognized industry, and so extensive has it become that even railways are pushed into the wilderness to facilitate the ever increasing supply to market, while ocean steamers travel up the rivers emptying into the Parana, so as to be on hand to receive the wood or the extract as it is brought from the forest, and whole settlements gather and leave permanent trace over this immense tract of Paraguay where quebracho grows. Quebracho may be cultivated, although the tree is of slow growth, but the necessity for that step may arise if the demand continues. In addition to the great value as furnishing tanning material, the tree is of indispensable service in railway and fence construction in South America, for the wood is extremely hard, and seems to be the only material immediately available for sleepers; its reputation has spread so widely that many sleepers are to-day exported to Europe.

The industry of extracting tannin from quebracho had its origin in France, where a consignment of logs was sent from Paraguay in 1874. The first factory in South America for the manufacture of the extract was erected at Puerto Casado, Paraguay, in 1889, followed a few years later by others, to support which thousands of leagues of quebracho land in the Paraguay Chaco were bought.

RAILWAYS AND INTERIOR WATERWAYS.

The only railway in operation in Paraguay is that of the Paraguay Central Railway Co., which, until the completion of the extension to the Argentine border, ran from the capital, Asuncion, to Pirapo, a distance of 155 miles (250 kilometers). During 1910 construction work on this extension progressed rapidly, and the gauge of the older section of the line was changed to conform to that of the Argentine railways. By July 1, 1911, the entire line had been opened to traffic as far as Villa Encarnacion on the Alto Parana River, thus giving to the Republic an increased mileage of 77 miles and making a total of 232 miles (373 kilometers) of railroad in operation.

The change of gauge and extension of this railroad is by far the most important development which has taken place in Paraguay for many years. Before these improvements were completed the journey from Buenos Aires to Asuncion by the river route alone occupied five days, and by rail and river about 55 hours. This time will be shortened by the route by rail from Buenos Aires to Posadas, opposite Villa Encarnacion, where a transfer is made to the ferry and the train taken at the latter point for the Paraguayan capital. It is expected that by October, 1911, a train ferry will have been established between Posadas and Encarnacion, so that the journey between the two capitals can be made without change of cars in from 30 to 35 hours.

In addition to the change of gauge of the Paraguay Central, the road has been equipped with entirely new locomotives, passenger and freight cars of the most modern description, so that the traveler may feel assured that his visit to the principal city of the Republic will be made as comfortable as possible.

This railroad proposes at no distant period to build 120 kilometers of new branches, one of which will run to Carapegua and another to Villeta, both situated in important agricultural sections of the country.

Surveys have been made for the construction of a Trans-Paraguayan Railway, which, starting from São Francisco, on the Atlantic coast of Brazil, will traverse that Republic to the Falls of Iguazu, which rival Niagara in grandeur; then, crossing the Parana River, proceed northwest to Asuncion. Construction work on this line is steadily progressing in Brazil, and its completion to the frontier of Paraguay is only a matter of time. By the completion of the Paraguayan section to Asuncion and an extension of this route up through the Gran Chaco, thence on through Bolivia and Chile to the Pacific coast, the commerce of many navigable rivers and of vast unexploited territories in the four Republics will be brought into closer touch with the outside world. Great tracts of quebracho and other timberlands will also be benefited and extensive zones of rich agricultural and grazing lands thrown open to settlement and cultivation.

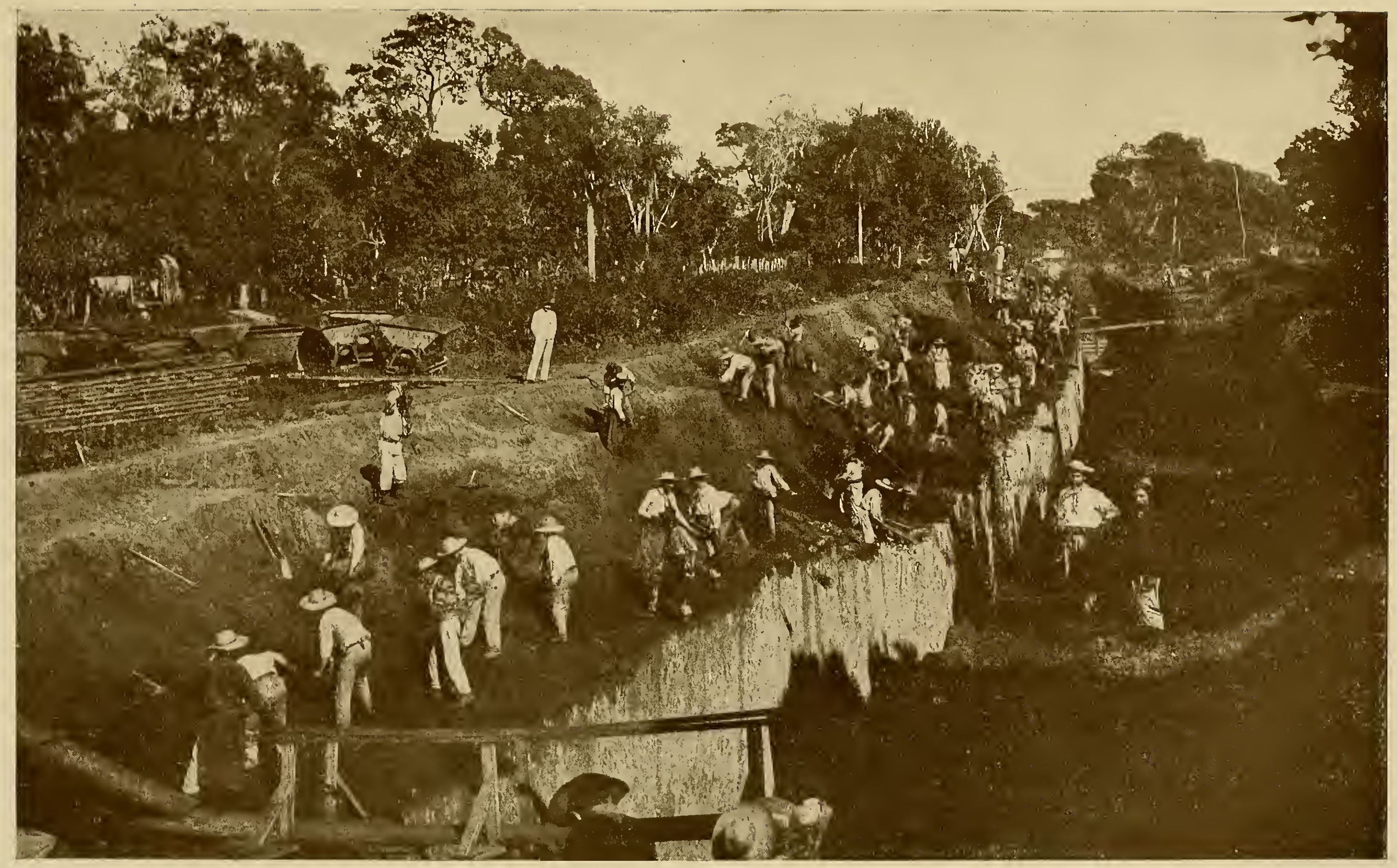
Paraguay is practically dependent on its waterways for means of communication and transportation, which, however, afford an efficient and convenient outlet for its products.

It lies between the rivers Paraguay and Parana, which join their waters at or near Curupaiti, at the extreme southern end of the Republic, and together with the Uruguay River form the mighty estuary of the Rio de la Plata, one of the largest bodies of water in the world.

The Parana River has a total length of 2,043 miles (3,288 kilometers) from its source in the Goyaz Mountain, Brazil, to its junction with the Uruguay, and is navigable for vessels of 12-feet draft as far as the city of Corrientes, a distance of 676 miles (1,090 kilometers), and from that city to the Guayra Falls, a distance of 600 miles (965 kilometers), for small vessels, but beyond that point navigation is impeded by the falls.

The Paraguay River is the most important waterway of the Republic, being navigable for vessels of 12 feet draft as far as the cities of Asuncion and Villa Concepcion and beyond that for smaller vessels almost its entire length of 1,800 miles.

A number of the affluents of the Paraguay River, such as the Pilcomayo, the Jejuy, and the Tibicuary River, are navigable for short distances.



CUTTING AN EXTENSION OF THE PARAGUAY CENTRAL RAILWAY AT PIRAPO, PARAGUAY.

Among the lakes the most important are the Ipoa and Ipacarai, the former covering an area of over 100 square miles, both of these being navigable for small craft.

The principal shipping points of the Republic on the Paraguay River are Asuncion, the capital, situated near the confluence of that river with the Pilcomayo; Villa Concepcion, and Humaita. The city of most importance on the Parana River is Villa Encarnacion.

THE PRESS OF PARAGUAY.

Conditions in this portion of South America, which, at first attached to the viceroyalty of Peru, but came later under the viceroyalty of La Plata, were such that most of the intellectual life within what is now known as the Republic of Paraguay was dependent upon Buenos Aires, and all that was printed reached the country thus indirectly. Certainly no periodical issue from the press was brought into existence during the early years of the Republic, but it is reported that the printing press was set up in the country as early as 1705.

The first periodical publication in Paraguay was called the Paraguayo Independente, and the first number appeared in April, 1845. It was established as an organ of the elder Lopez, and was conducted by him at the State's expense, while the leading articles were all from his pen. It continued with more or less regularity till September, 1852; from that time the Government had no organ till May, 1853, at which date the first number of the Semanario was printed as a weekly. Another weekly appeared in 1876, with somewhat of a literary character, then became a semi-weekly, but it finally ceased, its editor assuming management of the Semanario. This paper was ultimately the official organ of the Government and the gazette through which all news passed. As the nation sank beneath the weight of the protracted and exhausting war that ended in 1870, little effort toward newspaper activity could be made, and the press languished for many years.

The periodical press of to-day is represented by close to 30 publications, of which two-thirds are issued in Asuncion, the capital of the Republic. Concepcion, Villa Rica, Pilar, and Cosme are centers of newspapers also. There are about six dailies, the rest being weeklies, or even less frequently issued. As the capital is in direct touch with the other parts of the Republic, its papers circulate freely in all directions, while the larger and metropolitan papers of Buenos Aires are likewise read by the people. The local press has had publications in German, English, Italian, and French, to meet the interests of the colonists from countries where those languages are national.

The daily papers of Paraguay are of the Spanish type. They measure from 16 to 18 by 22 to 26 inches, with six or seven columns on each of the four, but more usually eight pages. According to the character of each paper, advertisements are found on all pages, either conspicuously placed on the first page, or absent from it, the reading matter, telegrams, official or social news being given the place of honor. The last page, in any case, is sure to be almost altogether filled with advertisements, and they find their way onto all pages of the inside sheets. The weeklies are of magazine size or even smaller, but attractive in makeup, and contain, besides news and statistics, considerable literary matter. Illustrations are used in the advertisements, but seldom appear otherwise.

The advertising rates are based chiefly upon the column centimeter (2/5 inch), although in a few instances the entire column is taken as the unit. Taking the first-mentioned space as an example, the rate is about 25 cents (gold) each insertion; but fair reductions are made for repeated insertions and for larger space ads. Considering that the circulation of these papers runs from 2,500 to 4,000, and are read by many classes of people, the field for publicity is a favorable one in Paraguay.

CUBA

Cuba, the largest of the West India Islands, has an area of 44,164 square miles and a population (1910) of 2,159,471, equal to 49 per square mile, being one of the most densely populated of the American Republics.

Several irregular mountain chains cross the island in various directions, forming between them a number of extremely fertile and healthful plateaus and valleys, in which nearly all the products of the Tropics are successfully raised. The Republic is especially noted for the excellence of its tobacco and sugar, which constitute the most important articles of export. The forests contain valuable cabinet woods, such as mahogany and cedar. Iron, copper, and manganese mines are worked, gold is found, and there are also rich beds of asphalt.

COAT OF ARMS OF CUBA.

The constitution of the Republic, proclaimed on February 21, 1901, provides for a republican, representative form of government, divided into legislative, executive, and judicial branches.

The Senate and the House of Representatives, forming together the National Congress, are the legislative power. The former consists of 24 and the latter of 83 members. Senators are elected indirectly for a term of eight years, at the rate of four senators for each Province, and the whole Senate is renewed by halves every four years. Representatives are elected for four years by popular vote, at the rate of 1 for every 25,000 inhabitants, every citizen over 21 years having the right of suffrage, and the House of Representatives is renewed by halves every two years. Congress meets at the capital, Habana, twice each year, on the first Monday in April and November, each session lasting for at least 40 days. It may also meet in extra session when called by the President or in accordance with its own rules.

The President, assisted by a cabinet of eight secretaries, exercises the executive power. His annual salary is $25,000. Both the President and Vice President are elected indirectly by an electoral college for a term of four years, and may not serve more than two consecutive terms. The President, Vice-President, and cabinet are as follows:

President: Maj. Gen. José Miguel Gómez (inaugurated January 28, 1909).

Vice President: Sr. Alfredo Zayas.

Secretary of State: Sr. Lic. Manuel Sanguily.

Secretary of Justice: Sr. Jesus M. Barraqué.

Secretary of Government: Gen. Gerardo Machado.

Secretary of the Treasury: Sr. Rafael Martínez Ortiz.

Secretary of Public Works: Sr. Joaquín Chalons.

Secretary of Agriculture, Commerce, and Labor: Sr. Emilio del Junco.

Secretary of Public Instruction and Fine Arts: Sr. Mario García Kohly.

Secretary of Health and Charities: Dr. Manuel Varona Suarez.

The Department of State (Secretaria de Estado) exercises jurisdiction over the diplomatic and consular corps, the naturalization of foreigners, and all matters pertaining to the maintenance of cordial relations with foreign countries.

PRESIDENT, JOSÉ MIGUEL GÓMEZ.

The Department of Justice (Secretaria de Justicia) has charge of all matters relating to the administration of justice through the national supreme court and subsidiary courts.

The Department of Government (Secretaria de Gobernación) supervises the acts and decrees of the governors of the Provinces and of provincial councils, municipal councils, and mayors. The army, rural and city police forces, the secret service, the archives of the nation, post and telegraph offices, prisons, the census office, and the election board are all under its charge. The official gazette and other publications are issued by this department, which is also charged with general supervision of the press and furnishes the latter with such information as deemed advisable. It also censures and regulates all theatrical performances, and all penal institutions are subject to its control.

The Department of the Treasury (Secretaria de Hacienda) collects and disburses the public funds, is charged with the service of the public debt, and the preparation of the annual budget, and controls the customhouses, the bureau of statistics, the revenue-cutter and coast service, and all matters pertaining to immigration. The national lottery is also under its supervision.

The Department of Public Works (Secretaria de Obras Públicas) constructs and maintains all public buildings, as well as roads and bridges. The lighthouse service, river navigation, sewer and water systems of cities, and the sanitation, construction, and defense of ports and harbors is intrusted to its care.

The Department of Agriculture, Commerce, and Labor (Secretaria de Agricultura, Comercio y Trabajo) is divided into a number of sections.

One of these supervises the sugar and tobacco plantations, maintains an agronomic station and experimental farm, and publishes an official bulletin. It has charge of the various agricultural colonies, the official cattle register, and the meteorological office. Another division is intrusted with all matters pertaining to the exploitation of mines and forests and also of the numerous medicinal springs in the Republic. A third division is charged with the inspection and control of banks, mercantile establishments, and corporations of all kinds. The copyright, patent, and trade-mark offices, the bureau of weights and measures, the bureau of labor and colonization, and in fact all matters relating to the promotion and regulation of commerce and industries are under its control. Still another division regulates the chase, issues hunting permits, protects singing and other useful birds, and gives advice regarding protection from insects and other pests.

The Department of Public Instruction and Fine Arts (Secretaria de Instrucción Pública y Bellas Artes) is divided into two sections, the first having charge of primary education and having under its control all the elementary public schools, and the second having control of the normal and high schools, the University of Cuba, the School of Arts and Crafts, the School of Painting and Sculpture, the National Conservatory of Music and Declamation, the national and other public libraries, and the National Astronomical Observatory.

The Department of Health and Charities (Secretaria de Sanidad y Beneficencia) exercises supervision over quarantine matters and public health throughout the country, having a competent corps of physicians attached to it. It maintains dispensaries and a sanitarium for tuberculosis, regulates pharmacies and drug stores, inspects schools and pupils, and attends to the street cleaning, sprinkling, and removal of ashes, refuse, etc., in the city of Habana. The national laboratory and the civil register for inscription of births, deaths, marriages, etc., are likewise under its care. The section of charities is intrusted with the control and regulation of all hospitals, asylums, and other charitable institutions.

The judicial power of the Republic is vested in a national supreme court, six superior courts, courts of first instance, and minor courts. The justices of the supreme court are appointed by the President with the advice and consent of the senate.

The regular army consists of 4,311 enlisted men and 212 officers. There is also a well organized and equipped rural guard of 5,298 men which is scattered in small detachments all over the island. The navy consists of 13 steam launches and revenue cutters.

There are 487 post offices in service throughout the country, together with some 171 te'egraph offices and 9 wireless stations operated by the Government.

HARBOR AND WATER FRONT AT HABANA, CUBA.

Cuba is divided politically into six Provinces, which are again divided into municipal districts. The administration of each Province is in the hands of a governor, assisted by a provincial council, both elected by popular vote for four years.

CUBA IN 1910.

The Republic of Cuba was prosperous during the year, for the sugar crop, comprising 70 per cent of the exports, was bountiful and the tobacco crop, although small, was not a failure. One misfortune must be mentioned, which was a repetition of the disaster of 1909; in both years a hurricane did considerable damage in the Provinces of Habana, Pinar del Rio, and Santa Clara, but the Government and the people have done a great deal to neutralize the destruction of nature.

In foreign and domestic affairs the nation was at peace. No disturbance within the country worth recording, and the conduct of the people during the elections toward the end of the year was in every sense admirable. A treaty of extradition was signed between Cuba and Venezuela, and negotiations for another of similar character were begun with Haiti. A treaty of arbitration with Brazil was ready for ratification at the end of the year. Many delegates to international congresses and conferences were sent to these meetings by the Republic, and invitations for others in 1911 have already been received and preparations made to be represented at them.

The public debt was decreased during the year by the sum of $3,465,827, and the President asserts that therefore the financial position of the Republic is improving. He emphasizes the statement that the great question before the people is an economic and not a political one, and therefore the active development of the natural resources of the country must be of paramount interest to all. The expansion of the post office, of the railway and steamer communication, the proper use of the forests, the encouragement of agriculture, and the training of labor all demand the careful consideration of government and the people.

Public health remained in an excellent condition. Quarantine restrictions were imposed in a few instances, but no case of yellow fever was reported.

Careful attention has been given to the development of public works throughout the country. Over 1,500 kilometers (932 miles) of cart roads were constructed, all of them in accordance with the general plan so to extend these roads that the Provinces may be the better brought together by easy means of communication. Intercourse in this way aids commerce and agriculture, a result which which is very important for Cuba at this time. Several of the harbors have been dredged, and this work is to be continued, while docks and piers are under repair. The water supply of many places also received serious consideration. Bills were passed for the erection of agricultural schools in the Provinces of Matanzas and Santa Clara, and for a high school in Habana. An academy of fine arts and one of history were incorporated. A commission to arrange for the erection of a presidential palace in Habana was appointed, and the secretary of agriculture was authorized to invite bids for the construction of 1,000 workingmen's houses in that city.

THE TOURING CAR IN CUBA.

The roads in the immediate vicinity of the large cities in Cuba afford an impetus for automobiling, and intercity connections over macadamized highways are fast becoming a universal reality. The Government has drawn plans for the repair and construction of some 1,500 miles of roads.

The census of the Republic showed, on July 30, 1910, a population of 2,150,112, which is an increase of practically 50,000 since the first of 1909. Of this number over 32,000 were immigrants, the greater proportion of whom came from Spain. The native birth rate was noticeably superior to the death rate, however, so that a normal increase took place, in addition to the influx from abroad.

FINANCE.

The total Government revenues for the year 1910 amounted to $41,614,694.10, and the expenditures to $40,593,392.21. These figures show a surplus of $1,021,301.89.

The principal sources of revenue were:

Customhouse receipts	$24,838,030.27
Loan taxes	3,570,176.50
Internal revenues	1,020,196.15
Communications	990,440.69
Consular fees	424,152.45
National lottery	3,652,400.51

The principal expenditures were:

Legislative Branch	840,170.32
Executive Branch	156,629.76
Judicial Branch	1,766,228.33
Department of State	714,515.26
Department of Justice	202,620.85
Department of Government	10,168,201.85
Department of the Treasury	2,724,987.98
Department of Public Instruction	4,319,998.83
Department of Public Works	3,572,155.20
Department of Agriculture, Labor, and Commerce	659,188.88
Department of Health and Charities	4,137,469.89
On account of interior debt	737,172.50
Interest and expenses on account of loan	2,933,732.56

DEBT.

According to the message of the President, Sr. Don José Miguel Gomez, presented to the National Congress on April 3, 1911, the public debt of Cuba amounted to $62,083,100, as follows:

Bonds of the revolution, 1896, 6 per cent	$2,196,585	
Redeemed	1,464,585	
		$732,000
Interior debt, 5 per cent	10,871,100	
Interior debt, 1906, 4½ per cent	16,500,000	
		27,371,100
Loan of 1904, 5 per cent	35,000,000	
Amortization	1,020,000	
		33,980,000
Total debt		62,083,100

FOREIGN COMMERCE.

The total foreign commerce of Cuba for the year 1910, according to the Bulletin of the Chamber of Commerce, Industry, and Navigation of Habana, amounted to $254,584,601. The imports were $103,675,581 and the exports $150,909,020. In 1909 the imports were $91,447,581 and the exports $124,711,069. There was therefore an increase for the year 1910, as compared with the preceding year, of $12,228,000 in imports and $26,197,951 in exports, or a total increase of $38,425,951.

The imports and exports of specie, which are not included in the above totals, were, for the year 1910, imports, $4,283,617, and exports, $361,538.

The imports by countries of origin for the past three years were:

Countries.	1908	1909	1910
United States	$41,576,980	$46,339,198	$54,569,393
United Kingdom	11,724,029	12,260,414	12,292,219
Spain	7,454,933	8,019,893	8,680,256
Germany	7,172,358	6,587,538	6,542,760
France	5,029,492	5,303,478	5,514,939
Other American countries	7,287,368	7,127,168	8,319,929
Other European countries	3,486,142	3,892,876	5,532,357
All other countries	1,487,293	1,917,016	2,223,728
Total	85,218,593	91,447,581	103,675,581

IMPORTS.

The following table gives the imports, by articles or classes of articles, for the years 1908, 1909, and 1910:

	1908	1909	1910
Earths, stones, and manufactures of:			
Stones and earths	$1,001,981	$737,563	$989,249
Shale, bitumen, etc	1,010,110	1,069,502	1,088,759
Glass and crystal ware	1,426,799	1,115,089	1,138,711
Earthenware and porcelain	665,355	768,106	695,051
Metals, and manufactures of:			
Gold, silver, and platinum	902,197	450,533	338,053
Iron and steel	4,767,384	5,284,761	6,163,754
Copper	566,473	626,279	809,127
All other metals	252,003	245,077	289,294
Chemicals, drugs, dyes, and perfumeries:			
Natural products	434,885	395,830	468,350
Colors, paints, etc	474,234	593,676	672,781
Chemical products	1,635,905	2,146,797	2,780,939
Essences, oils, etc	1,770,468	1,886,200	1,896,900
Fibers, and manufactures of:			
Cotton	8,993,815	9,815,695	8,527,821
Other vegetable fiber	2,930,809	3,579,710	3,562,301
Wool, hair, etc	1,022,319	1,041,286	1,088,225
Silk	780,947	771,376	619,704
Paper, and manufactures of:			
Paper and pasteboard	1,329,790	1,467,069	1,498,369
Books and prints	300,902	304,360	314,904
Wood and other vegetable substances:			
Wood	2,060,134	2,287,655	2,506,090
All other	141,681	141,683	190,026
Animals and animal products:			
Animals	690,508	360,314	341,112
Hides and skins	371,890	483,934	573,059
Manufactures	3,429,361	4,249,507	4,453,299
Instruments, machinery, and apparatus:			
Instruments	217,150	218,013	263,271
Machinery	3,959,624	5,601,387	8,381,763
Apparatus	1,612,699	1,677,992	2,821,968
Foods and drinks:			
Meats	8,318,094	9,892,104	11,476,815
Fish	1,194,282	1,137,024	1,310,144
Breadstuff	11,566,465	12,063,000	13,358,362
Fruits	580,958	549,866	672,674
Vegetables	3,500,787	3,664,230	4,522,049
Beverages and oils	2,766,074	3,048,265	3,296,467
Dairy products	1,976,544	1,840,170	2,524,057
All other	3,681,584	3,762,569	3,699,134
Miscellaneous	2,927,282	2,663,737	2,567,032
Articles free of duty (coal, paper pulp)	5,956,916	5,507,222	7,775,967
Total	85,218,593	91,447,581	103,675,581

Of stones and earths the imports, by countries, for the last two years were:

	1909	1910		1909	1910
United States	$571,939	$704,219	Other European countries	$102,788	$172,454
France	29,394	65,523	Other American countries	48	210
Germany	15,141	19,395	All other countries	204	897
Spain	5,281	16,154			
United Kingdom	12,768	10,397	Total	737,563	989,249

Under this heading the principal articles of imports were as follows (countries given in the order of value of imports):

Marble in the rough: From Italy and Spain. Marble, manufactured: From Italy, France, and Spain. Building stone: From United States, France, and Spain. All other stones: From Italy and United States. Cement: From United States, France, and Belgium. Gypsum: From United States and Germany. All other earths: From United States, France, and Germany.

Of shale, bitumen, etc., were imported from:

	1909	1910		1909	1910
United States	$1,063,300	$1,081,380	Other European countries	$396	$232
United Kingdom	3,754	2,517	Other American countries	24	82
Germany	1,550	3,419			
France	478	1,129	Total	1,069,502	1,088,759

The principal articles under this class were—Crude oil, petroleum, and the like; from United States and United Kingdom. Cordage oil: From the United States. Benzine: From United States, Germany, and France. Refined petroleum: From United States and United Kingdom. All other refined oils: From United States, Germany, and Italy.

Glass and crystal ware were imported from:

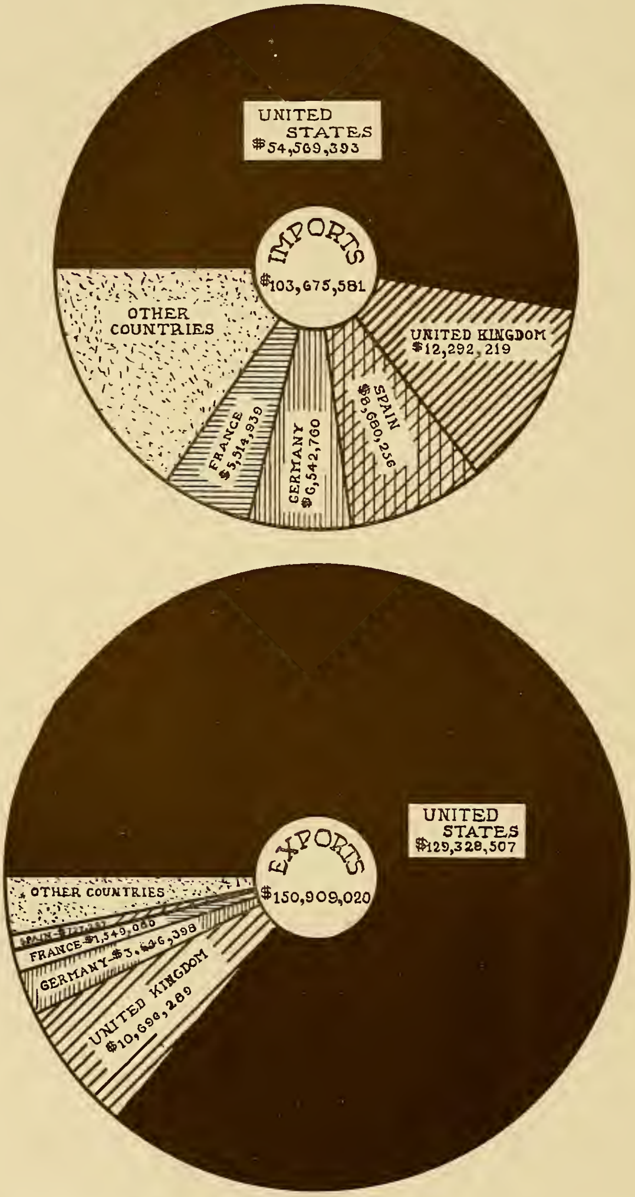
	1909	1910		1909	1910
Germany	$351,945	$389,310	Other European countries	$199,013	$162,643
United States	275,093	276,911	Other American countries	879	552
France	117,746	126,935	All other countries	381	575
Spain	103,129	115,734			
United Kingdom	66,903	66,051	Total	1,115,089	1,138,711

Articles included under this heading were—Mirrors: From Germany, United States Austria, and France. Hollow glassware: From Spain, United States, France, United Kingdom, and Germany. Electric lamps: From United States, Germany, France, and Belgium. Window glass: From Belgium, United Kingdom, Germany, France, and United States. All other articles: From Germany, United States, Austria, Spain, France, and United Kingdom.

Earthenware and porcelain were imported from:

	1909	1910		1909	1910
United States	$197,389	$175,019	Other European countries	$108,371	$85,786
United Kingdom	122,120	129,077	Other American countries	10	96
France	118,297	85,529	All other countries	5,626	3,277
Spain	113,695	111,682			
Germany	102,598	104,585	Total	768,106	695,051

Included in this class were: Articles of fire clay from Spain, United States, and Germany. Bricks: From Spain and United States. Roofing tiles: From France, Spain, and Belgium. Terra cotta piping: From United States and Spain. Hollow-ware of clay (or stoneware): From Austria, France, Germany, United Kingdom, and United States. Porcelain (in dishes or holloware): From Germany, United States, France, Japan, and United Kingdom. All other articles of earthenware or porcelain: From Germany, France, United Kingdom, Austria, and United States.



CUBA

— COMMERCE — 1910 —

$254,584,601

PAN AMERICAN UNION
Wash., D.C

H. M. Rivero.

Of gold, silver, and platinum, the imports by countries for the last two years were:

	1909	1910		1909	1910
France	$194,492	$139,866	Other European countries	$7,688	$4,304
Germany	139,253	101,002	Other American countries	22	9
United States	83,058	75,992	All other countries	594	256
Spain	14,946	10,122			
United Kingdom	10,480	6,502	Total	450,533	338,053

Under this heading, the principal articles were as follows—Gold jewelry: From France, Germany, Austria, United Kingdom, and United States. Silver jewelry: From France, Germany, Spain, and United Kingdom. Gold and silver plated ware: From United States, Germany, France, and United Kingdom. All other gold or silver ware: From United States, Spain, Germany, and France.

Iron and steel came from:

	1909	1910		1909	1910
United States	$3,812,025	$4,221,105	Other European countries	$251,830	$399,186
United Kingdom	767,274	996,448	Other American countries	653	2,310
Germany	294,037	337,428	All other countries	250	164
France	125,575	149,676			
Spain	33,117	57,437	Total	5,284,761	6,163,754

The principal articles included in this class were—Cast iron: Pigs from United States and United Kingdom. Cast iron in bars and beams: From United States, Belgium, United Kingdom, and France. All other cast-iron articles: From United States, United Kingdom, Germany, and Austria. Wrought iron or steel in bars or rails: From United States, Belgium, United Kingdom, France, and Germany. Rolled in sheets: From United States, United Kingdom, Belgium, and Germany. Cables and wire: From United States, United Kingdom, Germany, France, Belgium, and Spain. Firearms: From United States, Spain, Germany, and Belgium. Table cutlery: From United States, Austria, and Germany. Surgical instruments: From United States, France, and Germany. All other cutlery: From Germany, United States, France, and United Kingdom. Fine tools and implements: From United States, United Kingdom, Germany, and France. All other tools: From United States, United Kingdom, Austria, and France. Nails: From United States, Belgium, United Kingdom, and Germany. Iron or steel in pieces: From United States, France, and Belgium. Tin plate: From United Kingdom and United States. Manufactured tinware: From United States, Spain, United Kingdom, Germany, and France. Wire gauze: From Germany, United States, and Spain. Iron and steel pipes: From United States and United Kingdom. All other articles manufactured of iron and steel: From United States, United Kingdom, Germany, France, and Belgium.

Copper, and manufactures of, came from:

	1909	1910		1909	1910
United States	$431,950	$562,834	Other European countries	$6,679	$7,368
United Kingdom	83,228	133,486	Other American countries	393	131
Germany	75,707	67,430	All other countries	221	424
France	26,050	34,272			
Spain	2,051	3,182	Total	626,279	809,127

The principal articles included in this class were—Copper in sheets: From United Kingdom and United States. Wire: From United States, Germany, and United Kingdom. Wire gauze: From United States and Germany. All other manufactured articles of copper: From United States, Germany, United Kingdom, France, and Belgium.

All other metals, and manufactures of, were imported from:

	1909	1910		1909	1910
United States	$72,820	$199,320	Other European countries	$30,152	$25,547
Germany	46,317	53,107	Other American countries	6,687	1,887
United Kingdom	45,722	55,544	All other countries	174	436
Spain	23,004	25,646			
France	20,201	17,807	Total	245,077	289,294

Included in this class were—Zinc: From United Kingdom, Germany, United States, Spain, Belgium, and France. Nickel: From United Kingdom, Germany, United States, and Italy. Nickel, in sheets: From Belgium, Germany, and United States. Articles manufactured of nickel: From United States, Belgium, Germany, and France. Lead in lumps: From United States, Mexico, France, United Kingdom, and Spain. Lead pipes: From United States, Spain, and United Kingdom. All other metals, and articles manufactured of: From United States, Spain, United Kingdom, France, and Germany.

Of natural products the imports by principal countries for the last two years were:

	1909	1910		1909	1910
United States	$199,435	$220,884	Other European countries	$66,279	$71,037
Germany	48,326	55,718	Other American countries	4,097	15,443
Spain	47,349	70,147	All other countries	10,944	7,677
France	10,719	22,174			
United Kingdom	8,691	5,270	Total	395,830	468,350

Under this heading the principal articles were—Turpentine: From United States and United Kingdom. Rubber and gutta-percha: From United States. Rosin and pitch: From United States and United Kingdom. Opium: From Turkey, United Kingdom, China, and France. Vegetable products: From United States, Germany, Spain, and Morrocco. Seeds: From Germany. All other natural products: From United States, Spain, Germany, Italy, and France.

Colors, paints, etc., came from:

	1909	1910		1909	1910
United States	$354,142	$424,122	Other European countries	$17,900	$18,138
United Kingdom	162,196	166,435	Other American countries	338	156
France	28,512	26,887	All other countries	....	....
Germany	26,683	27,671			
Spain	3,559	9,099	Total	593,676	672,781

Articles included in this group were—Natural pigments and paints: From United States, Belgium, France, and United Kingdom. Artificial colors of metallic bases: From United States, United Kingdom, Germany, France, and Belgium. All other paints and colors from United States, Germany, France, and United Kingdom. Writing ink: From United Kingdom, United States, and France. Printing ink: From United States, France, and Germany. Varnish: From United States, United Kingdom, Belgium, and France.

Chemical products came from:

	1909	1910		1909	1910
United States	$1,256,857	$1,674,303	Other European countries	$57,651	$69,611
France	542,453	628,883	Other American countries	1,859	10,428
United Kingdom	157,927	218,240	All other countries	4,335	4,095
Germany	88,387	118,451			
Spain	37,328	56,928	Total	2,146,797	2,780,939

In articles belonging to this group the United States were leading in acids, oxides, salt, patent medicines, followed by Germany in acids, by United Kingdom in salt, and by France in patent medicine. Other chemical and pharmaceutical products came from France, United States, Germany, United Kingdom, Italy, Spain, and China.

Essences, oils, etc., were imported from:

	1909	1910		1909	1910
United States	$876,356	$852,700	Other European countries	$26,173	$23,364
France	497,884	493,213	Other American countries	2,170	766
Spain	276,549	319,823	All other countries	5,384	3,901
United Kingdom	139,505	146,037			
Germany	62,179	57,096	Total	1,886,200	1,896,900

Articles belonging to this class were: Oil to be used in the manufacture of soap: From the United States. Other vegetable oils: From United Kingdom, United States, France, Spain, and Italy. Animal fats: From Norway, United States, and Germany. Glycerine, olein, etc.: From United States, Germany, Belgium, France, and Austria. Candles: From United States, Spain, Belgium, and France. Common soap: From Spain, United States, and France. Fine toilet soap: From France, United States, Spain, Germany, and United Kingdom. Perfumery and essences: From France, United States, Germany, United Kingdom, and Spain. Starch: From United Kingdom, United States, British Colonies, Germany, and France. Glue: From United States, France, Germany, and Belgium. Gelatin: From United States, France, and Germany.

Of cotton and manufactures, the value of imports, by countries, was:

	1909	1910		1909	1910
United Kingdom	$4,226,732	$3,449,028	Other European countries	$507,230	$618,465
United States	1,849,688	1,302,959	Other American countries	7,628	819
Spain	1,516,291	1,523,698	All other countries	19,270	11,369
France	1,030,240	1,023,283			
Germany	658,616	598,200	Total	9,815,695	8,527,821

It will be seen from these figures that the United Kingdom has a commanding lead over all its rivals. Raw cotton, from the United States, Spain, and Mexico. Knitted goods: From France, Spain, Germany, United States, Italy, and Austria. Underwear: From United States, Spain, Germany, United Kingdom, France, and Austria. Cotton yarn and thread: From United Kingdom, United States, France, Belgium, and Spain. Plain tissues of cotton: From United Kingdom, United States, Spain, France, Switzerland, and Germany. Twilled tissues: From United Kingdom, United States, France, Spain, Germany, and Austria. Laces: From United Kingdom, Germany, France, Spain, and Switzerland. Tapestry: From Spain, United Kingdom, United States, Germany, and France. Tulles: From Germany, United Kingdom, and France. All other cotton goods: From United Kingdom, France, Spain, United States, and Germany.

Vegetable fibers and manufactures came from:

	1909	1910		1909	1910
United Kingdom	$1,846,735	$1,534,443	Other European countries	$581,567	$663,825
Spain	241,979	240,340	Other American countries	15,673	13,918
United States	170,783	152,157	All other countries	404,143	626,547
France	163,100	186,748			
Germany	155,730	144,323	Total	3,579,710	3,562,301

Of goods belonging to this class the following countries were leading—Yarns: Spain, Italy, United Kingdom, Germany, and Belgium. Twine: Spain, Italy, United States, Germany, and United Kingdom. Cordage and rope: United States, Spain, United Kingdom, and Italy. Sugar bags: United Kingdom, British India, Germany, and United States. Tissues of linen: United Kingdom, Spain, France, Germany, United States, and Netherlands. Knitted goods of linen: Spain and Germany. Linen lace: Germany, Spain, and France. Underwear: Spain, Germany, United States, France, and United Kingdom. Velvets and plushes: United Kingdom, Germany, and France. All other goods, manufactured of vegetable fibers: United Kingdom, United States, Spain, and France.

THE NEW PRODUCE EXCHANGE BUILDING IN THE CITY OF HABANA, CONSTRUCTED AT A COST OF $600,000.

Wool, hair, and manufactures came from:

	1909	1910
United Kingdom	$358,984	$404,343
France	342,867	339,306
United States	161,573	161,251
Germany	62,211	64,374
Spain	59,076	69,094
Other European countries	$54,760	$48,277
Other American countries	1,171	54
All other countries	644	526
Total	1,041,286	1,088,225

The principal articles included in this group were—Wool raw: From United States. Bristles: From United States. Bristle brushes: From France, United States, Germany, United Kingdom, and Spain. Hair and horsehair: From United States, France, Germany, and Spain. Tissues of wool: From United Kingdom, France, United States, Germany, Spain, Italy, and Belgium. Cloth: From United States, France, and United Kingdom. All other manufactured goods of wool, etc.: From United States, Germany, United Kingdom, France, and Spain.

Silk and manufactures of were imported from:

	1909	1910		1909	1910
France	$398,140	$259,123	Other European countries	$30,234	$18,108
United States	110,241	131,004	Other American countries	18	33
United Kingdom	45,037	33,541	All other countries	87,251	103,266
Germany	87,000	65,909			
Spain	13,455	8,720	Total	771,376	619,704

To this class belong floss silk: From United Kingdom and United States. Silk on reels: From Switzerland, United States, and United Kingdom. Tissues of silk: From France, Germany, Japan, United States, United Kingdom, China, Spain, and Italy. Knitted goods: From Austria and United Kingdom. Cloth: From United States, France, United Kingdom, and Germany. All other goods, manufactured of silk: From France, United States, Germany, Japan, Italy, Spain, and Switzerland.

Paper and pasteboard came from:

	1909	1910		1909	1910
United States	$574,788	$666,912	Other European countries	$90,050	$52,286
Germany	314,540	317,001	Other American countries	3,893	5,013
Spain	265,511	259,945	All other countries	3,188	1,743
France	191,051	173,312			
United Kingdom	24,043	22,151	Total	1,467,069	1,498,369

Spain, United Kingdom, and Canada. Paper for wrapping: From United States, Germany, France, and Norway. Wall paper: From France and Germany. All other papers: From Germany, United States, Spain, France, and Norway. Blank books came from United States, Spain, Germany, and France. Paper with printed headings: From United States, France, Spain, and Canada. Pasteboard in sheets: From United States, Germany, France, and Austria. Boxes of pasteboard: From France, Spain, United States, Germany, and Austria. All other manufactured goods of pasteboard: From United States, Germany, Spain, and France.

Books and prints were imported from:

	1909	1910		1909	1910
United States	$113,315	$119,280	Other European countries	$14,304	$14,665
Spain	69,156	77,112	Other American countries	6,758	5,953
Germany	51,654	51,969	All other countries	304	338
France	41,441	35,638			
United Kingdom	7,428	9,949	Total	304,360	314,904

The leading countries furnishing books were Spain, United States, France, Germany, and Italy. Prints, maps, charts, and photographs came from Germany, United States, Belgium, France, United Kingdom, Spain, and Norway.

Wood and articles manufactured thereof were imported from:

	1909	1910		1909	1910
United States	$1,689,125	$1,831,551	Other European countries	$56,214	$52,988
Spain	269,359	275,814	Other American countries	31,404	53,897
France	94,050	111,371	All other countries	6,787	7,777
Germany	71,862	80,910			
United Kingdom	68,854	91,782	Total	2,287,655	2,506,090

Lumber came nearly all from the United States. Manufactured woodenware: From United States, Germany, France, Spain, Italy, Austria, and Japan. Moldings: From United States exclusively. Furniture, manufactured, of fine wood: From United States, Germany, France, and Austria. Furniture of common wood: From United States, France, Germany, Spain, and Austria. Wooden boxes and cases wherein imported goods were packed: From United States, Spain, United Kingdom, France, Germany, and Norway. Barrels and staves from United States, Spain, United Kingdom, France, Belgium, and Germany.

Other vegetable substances and manufactures were imported from:

	1909	1910
United Kingdom	$36,401	$31,481
United States	32,402	79,317
France	15,719	22,148
Germany	12,838	11,658
Spain	12,546	13,427
Other European countries	$28,297	$29,136
Other American countries	28	57
All other countries	3,452	2,802
Total	141,683	190,026

They include cork: From Spain, United States, and Portugal. Cane, esparto, etc., unmanufactured: From United Kingdom, United States, France, and Germany. The same, manufactured: From United Kingdom, United States, Italy, France, Germany, Switzerland, and Japan.

Animals, mostly cattle, came from:

	1909	1910
United States	$331,281	$333,967
Germany	5,935	52
Spain	777	438
Other American countries	22,246	6,516
All other countries	$75	$139
Total	360,314	341,112

Hides and skins from:

	1909	1910
United States	$386,454	$468,029
Spain	74,436	74,972
France	13,011	11,981
United Kingdom	3,178	4,982
Germany	2,437	3,954
Other European countries	$54	$8
Other American countries	4,364	9,133
Total	483,934	573,059

Manufactures of animal products from:

	1909	1910
United States	$3,172,031	$3,336,110
Spain	896,728	895,699
France	67,812	67,299
Germany	62,277	72,423
United Kingdom	24,253	40,312
Other European countries	$6,300	$5,513
Other American countries	3,104	2,325
All other countries	17,002	33,618
Total	4,249,507	4,453,299

Under the last heading the principal articles of imports from the leading countries were as follows—Feathers for ornament: From France, Germany, and Austria. Other feathers: From France, United States, and Spain. Boots and shoes: From United States and Spain. Sandals without leather (so-called alpargatas): From Spain, France, and United States. Saddlery and harness: From United States and United Kingdom. Gloves: From France, United States, and Germany. All other manufactured leatherware: From United States, Germany, France, United Kingdom, Spain, Belgium, and Mexico.

Instruments from the different countries were imported at the value of:

	1909	1910		1909	1910
United States	$69,769	$97,240	Other European countries	$12,702	$12,403
Germany	58,621	64,266	Other American countries	78	45
France	55,940	62,399	All other countries	11	15
Spain	19,887	25,312			
United Kingdom	1,005	1,591	Total	218,013	263,271

Including pianos: From United States, Germany, Spain, and France. Other musical instruments: From Germany, France, Spain, United States, and Italy. Watches: From France, Germany, Switzerland, and United States. Clocks: From United States and Germany. Other instruments: From United States, Germany, and France.

Machinery was imported from:

	1909	1910		1909	1910
United States	$4,078,638	$5,861,080	Other European countries	$240,874	$659,982
United Kingdom	768,520	1,215,958	Other American countries	321	11,242
Germany	346,260	458,227	All other countries	59	131
France	157,563	165,952			
Spain	9,152	14,191	Total	5,601,387	8,381,763

Under machinery were imported sugar and spirits machinery: From United States, United Kingdom, Belgium, Germany, and France. Agricultural machinery: From United States exclusively. Electric machinery: From United States, Germany, United Kingdom, and France. Pumps: From United States and Germany. Boilers: From United States, United Kingdom, and Belgium. Locomotives: From United States and United Kingdom. Motors: From United States and Belgium. All other machinery: From United States, Germany, United Kingdom, France, Belgium, Italy, and Austria.

The following countries sent apparatus, at the value of:

	1909	1910		1909	1910
United States	$1,325,556	$2,238,046	Other European countries	$40,026	$43,998
United Kingdom	159,119	217,405	Other American countries	3,788	3,054
France	115,208	271,079			
Germany	24,496	35,064	Total	1,677,992	2,821,968
Spain	9,799	13,322			

Including sewing machines: From United States, Belgium, Germany, and United Kingdom. Typewriters: From United States exclusively. Bicycles, almost all from United States. Scales: From United States, Germany, and France. Railroad cars almost exclusively from the United States. Wagons, carts, etc.: From United States, France, Germany, Spain, Belgium, and Italy. Sailing vessels: From United States. Steam vessels from United Kingdom and United States. All other apparatus: From United States, United Kingdom, and Germany.

Meats came from:

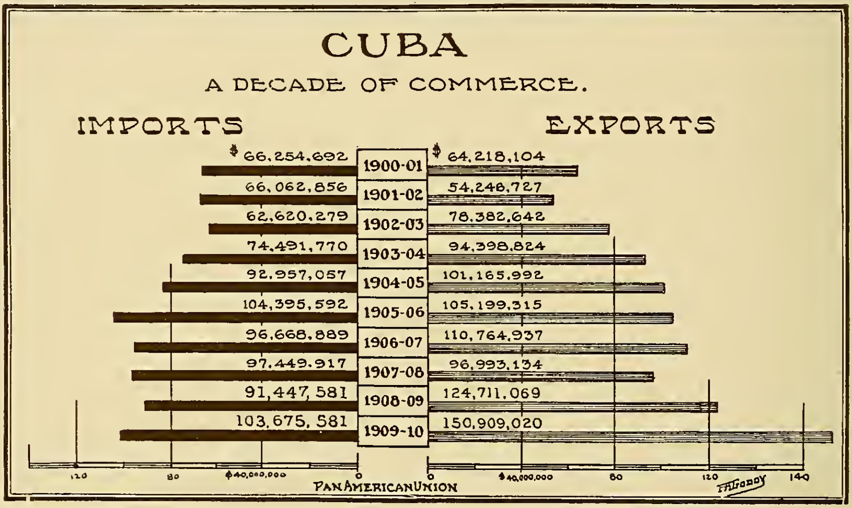
	1909	1910		1909	1910
United States	$7,423,344	$8,931,002	Other American countries	$2,318,521	$2,363,488
Spain	120,824	145,029	Other European countries	1,514	3,121
France	20,064	21,262	All other countries	2,061	4,945
Germany	3,979	4,334			
United Kingdom	1,797	3,634	Total	9,892,104	11,476,815

This included fresh and salted beef and pork practically all from the United States. Jerked beef (tasajo): From Uruguay and Argentina. Hams: The bulk from United States and part from Spain and Germany. Lard, almost all from the United States, and small part from Spain. Bacon practically all from the United States. Canned meat from United States, Spain, and France.

Fish came from:

	1909	1910		1909	1910
Spain	$228,314	$299,990	Other American countries	$310,664	$414,678
United Kingdom	165,565	223,110	All other countries	3,230	8,541
United States	48,151	62,482			
France	15,447	24,326	Total	1,137,024	1,310,144
Other European countries	365,653	277,017			

This included cod and stock fish from Norway, Canada, United Kingdom and some from United States. Herring: From Spain and United States. Mackerel: From Spain. Canned salmon: From United States and Spain. Canned sardines: From Spain, United States, and France. Other canned fish: From Spain, France, and United States.



Breadstuffs were imported in the two last years from:

	1909	1910		1909	1910
United States	$6,051,846	$6,757,850	Other European countries	$4,227	$24,102
United Kingdom	1,831,966	2,050,731	Other American countries	360,836	785,405
Germany	2,552,324	2,435,868	All other countries	1,146,487	1,185,151
Spain	108,075	106,577			
France	7,239	12,678	Total	12,063,000	13,358,362

The high import figures for United Kingdom and Germany represents principally rice, which came from the British Indies in transit via Germany and United Kingdom. Oats came from Canada, United States, Argentina, and United Kingdom. Rye: Practically all from Germany. Corn: From United States, Argentina, and United Kingdom. Flour of wheat and corn: Practically all from United States. Maccaroni and noodles from United States and Spain. Biscuits and crackers, etc.: From United Kingdom, United States, France, and Germany. All other articles of cereal products: From United States, Spain, France, United Kingdom, and Germany.

Fruits were imported in the last two years from:

	1909	1910		1909	1910
United States	$246,853	$301,960	Other European countries	$3,334	$4,367
Spain	249,973	308,947	Other American countries	12,795	4,800
France	11,455	12,998	All other countries	16,332	23,795
United Kingdom	7,263	12,237			
Germany	1,861	3,570	Total	549,866	672,674

Of fresh fruits, grapes almost all came from Spain; others from United States, Canada, and Spain. In dry fruits Spain was leading, with United States a close second, followed by United Kingdom. Fruit preserves: About one-half came from United States, others from Spain, France, and United Kingdom.

Vegetables were imported from:

	1909	1910		1909	1910
United States	$892,532	$1,185,471	Other American countries	$1,338,910	$1,747,921
Spain	733,236	773,005	Other European countries	106,865	208,090
Germany	402,828	409,780	All other countries	107,700	107,157
France	57,383	66,215			
United Kingdom	24,776	24,410	Total	3,664,230	4,522,049

Including onions: From Spain, United States, and Uruguay. Beans: From Spain, Mexico, United States, Germany, and Belgium. Peas: From Germany, Mexico, United States, France, and Spain. Potatoes: From Canada, United States, Spain, Germany, and Belgium. Canned vegetables: From Spain, France, United States, Belgium, and Germany. Pickled or preserved vegetables: From United States, Spain, United Kingdom, and Italy.

Beverages and oils, the principal importation was from:

	1909	1910		1909	1910
Spain	$2,054,960	$2,281,262	Other European countries	$40,970	$39,606
France	327,610	341,773	Other American countries	2,905	2,512
United States	286,834	318,543	All other countries	7,320	12,481
United Kingdom	272,428	255,929			
Germany	55,238	44,361	Total	3,048,265	3,296,467

Articles included in this class were olive oil: From Spain, United States, France, and Italy. Cottonseed oil practically all from United States. Wine in barrels and bottles almost all from Spain and part from France, Germany, and Italy. Beer in barrels: From Germany and United States. In bottles: From United Kingdom, United States, and Germany. Cider came practically all from Spain and sparkling wines from France. Brandies, liquors, and cordials came from France, Germany, United States, Spain, United Kingdom, and Netherlands.

Dairy products were sent by:

	1909	1910		1909	1910
United States	$763,097	$742,717	Other European countries	$552,729	$1,293,618
United Kingdom	408,651	349,690	Other American countries	789	37,074
Spain	58,736	46,491	All other countries	2,062	6,642
Germany	37,628	32,451			
France	16,478	15,374	Total	1,840,170	2,524,057

This includes condensed milk, butter, and cheese. More than a half the condensed milk came from United States, the rest from United Kingdom, Norway, Germany, Netherlands, and Switzerland. Of butter, nearly 50 per cent came from Denmark, followed by United States and Spain a close third, the rest from Germany, France, and Netherlands. The bulk of cheese came from Netherlands with less amounts from United States, United Kingdom, Switzerland, Spain, France, and Germany.

All other alimentary substances at the value of, from:

	1909	1910		1909	1910
United States	$1,252,781	$1,029,673	Other American countries	$2,297,523	$2,393,998
Spain	143,545	188,712	Other European countries	15,140	11,152
United Kingdom	20,466	26,082	All other countries	8,819	15,185
France	19,823	26,879			
Germany	4,472	7,453	Total	3,762,569	3,699,134

Articles included under this heading were refined sugar from the United States exclusively. Chocolate and coco from United States, Germany, Belgium, and Venezuela. Coffee from United States, Brazil, Venezuela, and Mexico. Sweet chocolate and candy from France, Spain, United States, United Kingdom, and Germany. Oleomargarine practically all from United States and some from Netherlands. Eggs: The bulk from United States but some from Mexico and Spain.

Miscellaneous came from:

	1909	1910		1909	1910
United States	$1,491,318	$1,275,803	Other European countries	$212,677	$284,469
France	351,554	346,814	Other American countries	50,160	78,936
Germany	257,290	255,163	All other countries	48,549	48,519
Spain	125,635	144,732			
United Kingdom	126,554	132,596	Total	2,663,737	2,567,032

Under this heading the principal articles from the leading countries were as follows—Fans: From Japan, Spain, United States, China, and France. Amber, tortoise shell, and jet: From France, Germany, Austria, United States, and Japan. Articles of horn, etc.: From France, United States, Spain, Germany, and United Kingdom. Articles of celluloid: From France, United States, Germany, Spain, and Austria. Oilcloth: Practically all from United States. Matches: From France and Italy. Rubber hose: Nearly all from United States. Other rubber manufactures: From United States, Germany, and France. Of toys the bulk came from Germany, the rest from United States, Spain, and France. Umbrellas and parasols were imported from France, United States, Spain, and Germany. Hats: From Italy, United States, France, Ecuador, United Kingdom, Germany, and Colombia. Waterproof articles: From United States, United Kingdom, Spain, France, and Germany. Tobacco (chewing tobacco). From United States and China. Finally, all other articles, not specially mentioned: From United States, Germany, France, Spain, United Kingdom, and others.

The last group mentioned in the general table refers to articles free of duty, imported from:

	1909	1910		1909	1910
United States	$4,622,230	$6,806,049	Other American countries	$316,271	$346,988
United Kingdom	250,086	220,794	Other European countries	52,235	127,502
Germany	105,209	51,603	All other countries	4,134	482
France	78,622	125,087			
Spain	78,435	97,462	Total	5,507,222	7,775,967

The bulk of articles imported free of duty were: Coal and timber, which came practically all from United States. Agricultural implements, such as plows, hoes, and machetes, from United States, United Kingdom, and Germany. Trees in natural or fresh state, nearly all from United States. Wood pulp for making paper: From United States, France, Germany, Belgium, and Canada. Mineral water: From Spain, France, Germany, United States, and Belgium. Cheesecloth: From United States and Netherlands. Barbed wire: From United States, Belgium, and United Kingdom.

From the tables above it will be seen that nearly one-half of the imports were from the United States, which led in all kinds of articles, except gold and silver ware, cotton and manufactures, vegetable fibers and manufactures, wool, hair and manufactures, silk and manufactures, dried fish, and beverages. Of the European countries the United Kingdom follows as second, followed by Spain, Germany, and France in close succession.

EXPORTS.

The exports by countries for the last three years were:

	1908	1909	1910
United States	$78,868,490	$109,407,613	$129,328,507
United Kingdom	4,775,966	5,013,676	10,696,289
Germany	4,711,164	4,053,960	3,646,398
Spain	958,207	865,519	727,297
France	1,401,997	1,216,275	1,549,080
Other American countries	2,257,077	2,660,971	3,391,216
Other European countries	978,084	1,081,241	915,175
All other countries	652,339	411,814	655,058
Total	94,603,324	124,745,304	150,909,020

The following table shows the value of the principal articles exported from Cuba during the last three years:

	1908	1909	1910
Animals and animal products:			
Live animals	$21,149	$38,580	$14,623
Hides and skins	906,980	1,482,108	1,894,738
Products	94,873	72,757	108,280
Sugar and molasses:			
Sugar	52,166,812	79,130,181	108,762,632
Molasses	870,836	1,556,695	1,477,756
Confectionery	42,721	47,194	44,007
Fruits, grains and vegetables:			
Fruits	2,085,771	2,359,397	2,098,089
Grains and vegetables	493,125	674,850	453,083
Fishery products:			
Tortoise shells	51,009	64,843	36,828
Sponges	280,537	271,596	354,855
Mineral products:			
Asphaltum	31,144	47,586	13,499
Iron and copper ores	2,098,460	3,362,289	4,330,476
Old metals	121,324	82,751	2,299
Forest products:			
Vegetable fibers	79,773	74,891	37,431
Wood	1,356,282	1,516,356	1,663,398
Dyes and tanning material	....	5	40
Tobacco:			
Unmanufactured	19,557,107	19,084,704	15,450,943
Manufactures of	12,771,915	12,900,490	12,423,007
Miscellaneous:			
Bee products	743,386	985,952	703,680
Distilled products	339,205	359,655	356,037
Other articles	429,011	326,718	216,668
Reexportation	61,904	271,471	436,651
Total	94,603,324	124,711,069	150,909,020

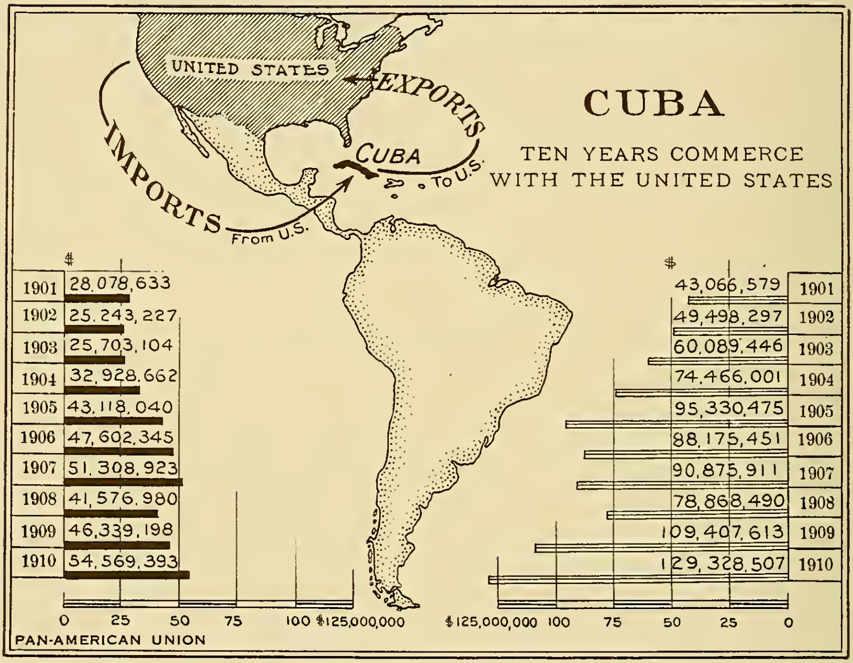
Animals (mostly mules) were taken by the United States and a small part only ($5,299) was exported to other countries as Mexico and British West Indies.

Hides and skins were exported in the past two years to:

	1909	1910		1909	1910
United States	$1,066,810	$522,112	All other countries	$542	$150
Germany	369,304	1,070,494			
France	45,362	195,724	Total	1,482,108	1,894,738
Other European countries	90	106,258			

Of which about 75 per cent is the value of cattle hides.

Animal products, including horns, bones, tribes, etc., were taken by the United States (1910, $86,501), Germany (1910, $11,670), France (1910, $1,512), and other European countries (1910, $8,975).



Of sugar, the United States was until 1909 practically the only buyer, in that year taking $79,129,632 out of a total of $79,130,181. Of the total value of $108,762,632 in 1910, the United States bought $102,445,805, the United Kingdom $5,995,288, and France $150,000.

Of molasses the bulk was sent in 1910 to the United States as in former years (1909, $894,475; 1910, $950,904), and a part to the United Kingdom (1909, $487,065; 1910, $583,030).

Confectionery was taken practically all by the United States (1909, $36,263; 1910, $30,443), the rest finding a market in other American countries, Spain, Germany, and France.

Fruits and grains found the chief market in the United States, which bought pineapples, bananas, oranges, coconuts, lemons, and other fruits to the value of $2,354,389 in 1909 and $2,092,245 in 1910.

Only cacao, which is included in this group, found any considerable market in other countries, according to the following table:

United States	$270,469
France	143,219
Germany	37,035
Spain	14,533
Netherlands	10,345
United Kingdom	6,180
Other countries	6,333
Total	488,114

Tortoise shells were taken by France, Germany, and Belgium as the only buyers.

Sponges were exported in the past two years to the following leading countries:

	1909	1910		1909	1910
United States	$135,313	$121,613	Other European countries	$3,237	$3,87
France	92,564	134,861	All other countries	49	1,060
Germany	14,809	10,649			
United Kingdom	13,866	73,084	Total	271,596	354,855
Spain	11,758	9,611			

Asphalt to the value of $46,836 in 1909 and $11,845 in 1910 was taken almost all by the United States, and only a small part, $1,569 in 1910, found its way to Germany.

Iron and copper ores found their only market in the United States, as only an insignificant part, of the value of $100 being sent to the United Kingdom.

For old metals the United States was the only buyer.

Vegetable fibers (including palm straw, henequen, etc.), $18,883, were exported to Germany in 1910; $5,030 to the United States and other European and American countries.

Woods were taken in the last two years by:

	1909	1910		1909	1910
United States	$949,767	$954,862	Other European countries	$85,691	$105,301
United Kingdom	176,192	247,371	Other American countries	28,283	1,896
Germany	175,483	261,370	All other countries	40	2,374
France	53,580	49,338			
Spain	47,320	40,886	Total	1,516,356	1,663,398

Of the different kinds of woods exported the bulk was cedar wood, for which the principal buyers were the United States, Germany, Netherlands, and United Kingdom; and mahogany wood, the United States, United Kingdom, France, Spain, Germany, and Belgium.

Unmanufactured (leaf) tobacco went to:

	1909	1910		1909	1910
United States	$15,800,128	$12.785,047			
Germany	1,881,832	824,343	Other European countries	$300,282	$194,867
Spain	191,792	378,770	All other countries	13,671	29,063
France	93,027	60,251			
United Kingdom	43,207	68,756	Total	19,084,704	15,450,943
Other American countries	760,765	1,109,846			

Under "Other American countries" the chief buyers were Canada, Argentina, and Uruguay. Of "Other European countries": Austria, Belgium, Netherlands, and Portugal.

Manufactures of tobacco (the bulk cigars with some cigarettes and very little cut tobacco) found markets in the following countries:

	1909	1910		1909	1910
United Kingdom	$4,215,744	$3,647,834	Other American countries	$1,610,131	$1,769,716
United States	4,125,584	4,213,837	Other European countries	326,458	288,284
Germany	1,089,687	1,077,184	All other countries	326,603	469,600
France	648,783	706,158			
Spain	557,500	250,394	Total	12,900,490	12,423,007

The leading buyers of manufactured tobacco in "Other American countries" were Canada, Argentina, Chile, Colombia, Panama, Dutch West Indies, Mexico, Costa Rica, and Peru. Of "Other European countries": Belgium, Italy, Netherlands, and Portugal.

Bee products (including honey and wax) were exported to:

	1909	1910
United States	$417,116	$196,257
Germany	355,857	309,571
France	13,818	11,990
Other European countries	199,161	185,862
Total	985,952	703,680

About 60 per cent of the total value represents honey sold to United States, Germany, Belgium, Netherlands, France, and Denmark. For wax the chief buyer was Germany, followed by United States, Belgium, Denmark, Netherlands, and United Kingdom.

Distilled products were taken by:

	1909	1910		1909	1910
United Kingdom	$59,000	$68,668	Other American countries	$149,768	$201,059
United States	39,682	2,471	Other European countries	528	500
France	34,670	10	All other countries	60,911	61,564
Spain	15,091	20,919			
Germany	5	846	Total	359,655	356,037

Under this heading are included rum and alcohol, exported principally to Uruguay, Argentina, United Kingdom, France, United States, Spain, and Honduras.

All other articles not specially mentioned were exported in the last two years to:

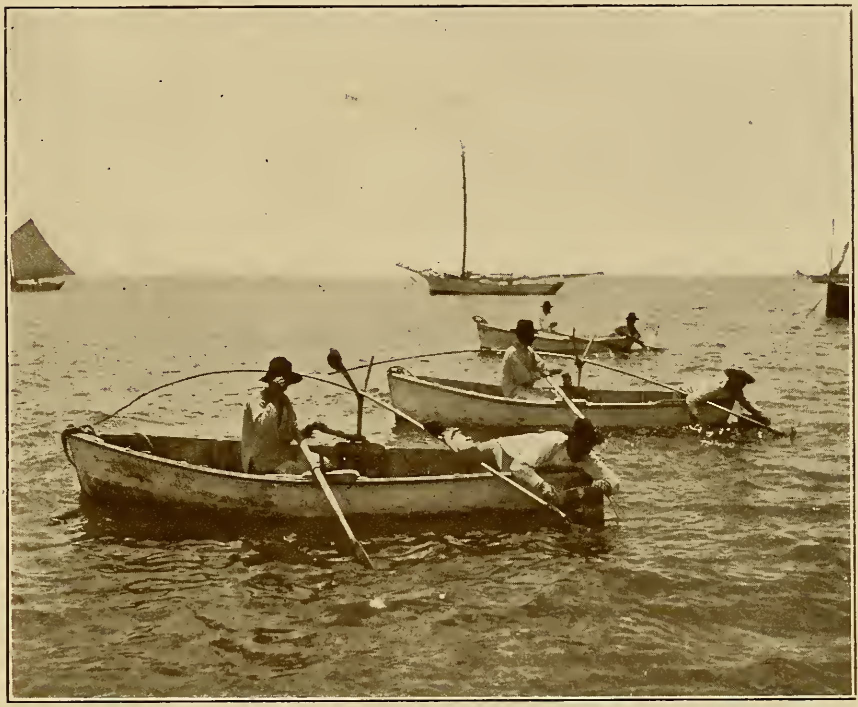
	1909	1910		1909	1910
United States	$214,565	$100,599	Other American countries	$50,481	$95,067
France	20,519	7,240	Other European countries	986	240
Spain	19,226	6,055	All other countries	3,736	1,150
Germany	10,145	5,130			
United Kingdom	7,060	1,187	Total	326,718	216,668

Reexports to the value of $436,651 represent foreign articles imported to Cuba, which were reshipped generally to the United States.

PRODUCTS AND INDUSTRIES.

Cuba has always been essentially an agricultural country, but the mineral resources have of late years attracted attention, so that the products of the land promise to be more diversified as Cuba becomes better understood.

The Province of Oriente, as Santiago is now known, is the richest as regards mineral wealth. At the beginning of the year there were 1,074 mines registered, the metals produced being iron, copper, manganese, gold, mercury, zinc, lead, silver, and antimony; coal, asphalt, asbestos, and petroleum were declared also. Santa Clara Province has had registered about the same kind of metals, with the addition of sulphur. Camaguey is usually associated with Oriente as a mineral region, while Matanzas and Habana are grouped with Santa Clara. Pinar del Rio Province has 143 registered mines, including those of iron, copper, gold, lead, and manganese, with coal and asphalt. In fact, the asphalt beds of Cuba, it is believed, and the bitumen deposits in general, will eventually prove superior to any others in the world. The possibilities of a great industry from them are already promising. Oil production on a small scale has for years been carried on, but not to the extent the deposits would warrant. The bitumen of Cuba is exceptionally pure and of high quality, and as the resilience of the article manufactured from it is very good, it is probable that for purposes where this quality is necessary it will be mostly utilized. Mineral waters of great merit are found at a number of points in the island, and the springs have for years been popular among the inhabitants.



SPONGE FISHERS AT BATABANO, CUBA.

In the restricted limits for sponge growing and fishing, Cuba claims an important place, for here the sponge is found both on the north and south coasts, the most important beds being on the southern coast in the vicinity of Batabano. Each fishing smack carries a number of dories operated by two men, a "sculler" and a "hooker." The latter uses a water telescope consisting of a glass-bottomed bucket to aid him in spying out the sponges.

As far as stock raising, poultry, and bee farming are concerned, Cuba is very favorably situated. The absence of cold, the good pastures, and freedom from pests are favorable factors. Thin cattle are imported from neighboring countries to be fattened here, and the markets are usually excellent. While there are many dairies in the vicinity of Habana, milk is rather expensive, and a modern dairy should make substantial profits. Very little butter is made on the island and not much cheese, but no reason exists for this condition, and the industry should be encouraged. Chickens do well and bring good prices. Apiculture is profitable, for the climate and flora are both suitable, and the production of honey has resulted in an export amounting to about $750,000.

Other products are specifically agricultural. Whatever manufacturing is done depends upon these resources, although in the cities small factories or household industries supply local or domestic needs. Cotton is being cultivated experimentally, and the Government is extending aid to useful experiments in this direction. The extent of Cuba's fruit and vegetable industry is not realized until the subject is carefully studied, when it is seen that quantities of pineapples, oranges, and grapefruit, tropical fruits, tomatoes, onions, potatoes, and other vegetables are exported. Bananas, coconuts, cacao, coffee, and sugar are productive crops well known as coming from Cuba for centuries. Sugar cane, is, of course, a great crop, which has made the name of the island known in the consuming markets of Europe when the price of sugar was just beginning to come within the reach of the common people—that is, when it began to be a necessity and not a luxury.

A SPONGE DOCK IN BATABANO, CUBA.

The average output of sponges from Batabano approximates $500,000 per year. In this district over 25 per cent of the male population are engaged in fishing, trimming, and marketing the finished product.

One industry, however, is worthy of special comment, because of the general utility of the article produced, and the limited and restricted areas available for its growth. That is the sponge industry.

SPONGES are of essential value in domestic life, as well as in science and the arts, and it is becoming a serious question how to prevent their indiscriminate collection, on the one hand, and how to propagate them, on the other. Sponges were first gathered from the waters of the Mediterranean, but early in the past century they were discovered off the coast of Florida, and in comparatively recent years they have been located in many other parts of America, especially in the waters of the Gulf of Mexico and the Caribbean Sea. American sponges were in 1910 produced to the value of $1,500,000, which represents two-thirds the world's supply in weight but about half the world's supply in value. Of this American supply much comes from Florida, the Bahama Islands, the coast of Mexico, Colombia, Panama, Honduras, and Haiti, but a goodly portion is taken off Cuba, from the south coast, near Batabano, opposite the Isle of Pines; some beds exist also on the north coast. The average grade of sponges from Batabano is worth $2 to $2.25 a pound, and some of the largest sponges weight 4 to 6 pounds. The method of hooking, in preference to that by diving or submarine boating, is preferred in Cuba, though simple wading in shallow water is productive of some results. Of the male population of Batabano, 25 per cent are engaged in sponging, and about one-half of the sponges gathered by them are marketed in the United States, the balance going to England, France, and Germany.

Cuba will always be famous, however, for one distinct vegetable product, which is inseparably associated with the island. This is tobacco; for although unexcelled tobacco is grown in various parts of the world, a unique flavor attaches to that coming from the limited area called the "Vuelta Abajo."

TOBACCO is the typical plant of Pan America. Found on the Western Continent by the earliest explorers, the peculiar use of the plant became immediately popular among the peoples of Europe. Within 20 years after the introduction of the first pipe on the Continent, smoking had become such a universal habit that the use of tobacco was stigmatized as a vice meriting excommunication by Pope Urban and a crime deserving imprisonment by King James. Despite these anathemas, we find the weed so thriving in the congenial soil of universal appreciation that it has become an actual necessity to the majority of mankind within the limit of four centuries.

The use of tobacco has led to a world industry that is rooted in the very foundations of present-day civilization. As a measure of its importance, imagine, if you can, the drastic consequences if by reason of some extraordinary supernatural occurence the world's tobacco crop should be completely and irrecoverably destroyed, with no hope of even one leaf being grown again. Can you realize the appalling social and industrial revolution that would ensue? Think of the millions thrown out of employment, of the millionaires reduced to penury, the revenues of nations cut in half, and the numberless millions suffering the pangs of acute craving due to the sudden stoppage of a daily habit. Smoking yields only to eating and drinking as a universal habit. Over two thousand six hundred millions pounds of tobacco were grown in 1909. This would mean 40 cigars for every man, woman, and child in the world.

As to the origin of the word the authorities differ. Tobacco may be a corruption of Tobago, from the island of that name; it may come from Tobaco, a Province of Yucatan; it may be a native word of the aborigines of Haiti; or a confusion of the Amerindian name for pipe. *Nicotiana tobacum* is the botanical designation of the plant, with solanum as the family classification, which makes it a cousin to the potato, the tomato, and several other tubers. Some 50 varieties of the genus nicotiana exist, but by far the largest amount of the tobacco trade finds its origin in *Nicotiana rustica* and *Nicotiana tobacum*. The latter is cultivated in every one of the countries of the Pan American Union, a striking fact which shows the wide range of territory and different climates suitable for planting the nicotine weed. Some varieties are not unlike a narrow-leafed, wide-spreading, grass-green cabbage in appearance, and do not differ materially in the method of cultivation from that vegetable. The leaves of the tobacco plant are "lanceolate," which means they are rather narrow, tapering to a point at the apex and the base, varying from 12 to 42 inches in length and 8 to 24 inches in width. They wind around the stalk, alternately attached, in spiral fashion. The plant itself may be 2 or 8 feet tall, according to conditions.

Tobacco is grown from seed, and the greatest care must be exercised in selecting the seed suitable to the particular soil and climate of the territory where it is proposed to produce the plant. Curious chromatic influences affecting the leaves of tobacco are directly traceable to the coloring matter found in the soil in which the seed is planted. "Crossing" is easily accomplished, therefore the character of the plant may be modified to suit local conditions, but accidental "crossing" must be carefully guarded against. The cultivation of tobacco is a highly specialized industry, and volumes have been written dealing with the principles of ripening, curing, and treating the plant for trade. The evolution of the cigar involves a technical knowledge comparable to that employed in the highest arts and demands individualistic talent and extraordinary skill. "Puros" supplied to the royal households of Europe are a finished product of at least six different processes, each requiring special expertness only acquired after constant years of application with one end in view.

A TOBACCO WAREHOUSE IN HABANA, CUBA.

From the selection of seeds for planting to the rolling of the cured leaf wrapper, tobacco must be handled with the greatest of painstaking care in order to bring about the best results.

The finest quality of tobacco grown comes from Cuba. It is cultivated within a very restricted area known as the Vuelta Abajo district in the Province of Pinar del Rio. It costs approximately $2,000 to cultivate an acre there. But though Cuban tobacco is world famous, the "most beautiful isle" supplies only a small proportion of the world's output. Here the United States takes first place, with 1,233,800 acres under cultivation, yielding 984,349,000 pounds in 1910, over a million acres growing nearly a billion pounds. It is natural to expect the greatest consumption in the country of greatest production, so the per capita rate of 7½ pounds does not seem out of proportion, but when we analyze the figures and realize that the men of the family must smoke the share of the women and children, to say nothing of the non-smokers, it is easy to understand the enormous revenues raised on tobacco alone. In 1910 the United States derived $82,013,000 from taxes on this article.

India, Russia, Hungary, and even Japan, produce large quantities of raw tobacco, so we see that the cultivation of this plant, which means so much to the comfort of man, has spread to every quarter of the globe. In the Western Hemisphere Brazil is rated second to the United States in output, that country exporting 64,000,000 pounds in 1909, which is an indication of what may be expected in the future when the wealth of interior Brazil is opened to the world. Argentina consumes all of the 31,000,000 pounds grown within her borders and imports more; in fact, as has already been stated, every country of the Pan American Union grows tobacco.

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A TOBACCO FIELD.

Tobacco is raised in nearly every Province of Cuba and in value is the second source of the agricultural wealth of the country. Probably the finest grade of leaf cultivated anywhere is that which is produced in the Province of Pinar del Rio and known as vuelta bajo.

The best cigars bring the highest prices, so it follows that those interested in the trade bend every effort to produce the best. Gossip says that the Pope and the nobility of Russia are supplied with the very finest quality of cigar that Cuba can produce, but as there is no fixed standard of taste it is difficult to classify the best. There is no crop that varies so much in quantity and quality as tobacco. The uninitiated believe that a popular brand can maintain a fixed standard of excellence year after year at an unvarying price. This is practically an impossibility, because there are so many accidental influences beyond the control of man, each reacting beneficially or detrimentally on the tobacco crop. However, skill in selection and treatment enables dealers to approximate a unity of quality which satisfies the majority of smokers. Fastidious users of tobacco demand a cigar that draws easily and burns evenly white, giving no taste of the nicotine content. In fact, contrary to the generally accepted idea, the amount of nicotine in the average cigar is negligible.

The use of snuff was at one time much more the fashion than at present, that habit of taking tobacco having been introduced into Europe by the Portuguese Jesuits, who had learned the trick from the aborigines of Brazil. Eating or chewing tobacco was at first the simple way of taking it as a medicine, for the Indians understood the therapeutic properties of the leaf, but the early settlers on the American continents found this a convenient way of getting the physiological effects of the plant, and the custom now gradually approaching desinence was universal among the pioneers. So much has been written anent the harmful effects of the use of tobacco that in conclusion it may be of interest to smokers to have the dictum of the "Lancet" on this point: "It (tobacco) is innocent compared with alcohol; it does infinitely less harm than opium; it is in no sense worse than tea; and by the side of high living it contrasts most favorably."

RAILWAYS AND INTERIOR WATERWAYS.

At the end of 1910 the extent of railways in the Republic was 3,416 kilometers (2,123 miles).[1] This makes Cuba, in proportion to its size, one of the best served Republics in America in respect to railroad transportation.

Cuba was one of the very first countries to build a railway, for there was a line put into operation in 1837, 12 years in advance of Spain, the mother country. There are four great systems which have stretched their lines almost from one extremity of the island to the other. Through trains run daily between Habana and Santiago, but over tracks belonging to three different systems, and many branch lines from this main trunk connect the principal ports on both the north and south coasts with the interior.

The four systems in Cuba are: The United Railways of Habana, the Cuba Railroad, the Cuban Central Railway, and the Western Railway of Habana. The first and last named have terminal stations in Habana.

The United Railways of Habana offers the first section of this through route, which extends as far as Santa Clara. It has also branch lines north and south, one of which runs to Batabano, where it connects with regular steamship service to the Isle of Pines. Other ports reached by this system are Matanzas and Cardenas, on the north, and the road is extended to within a few miles of Encarnacion, on the Bay of Cienfuegos.

The Cuba Railroad is the eastern system of the Habana-Santiago route, running between the last-named point and Santa Clara. It serves an immense and relatively new territory in the island, among the principal ports being Antilla, on Nipe Bay, which is becoming the center for American activity of all kinds.

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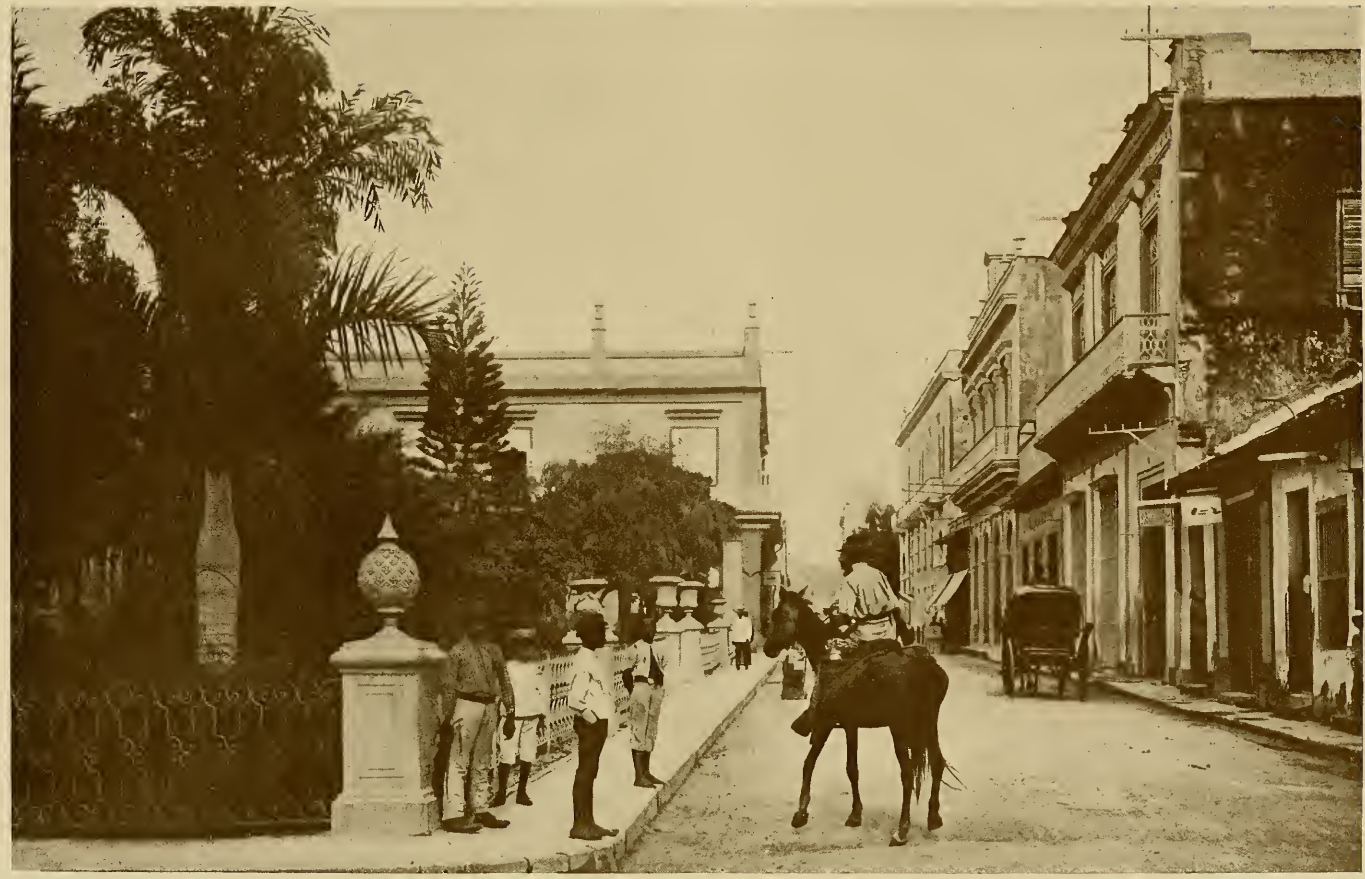
[1] This represents the actual mileage of the lines engaged in public service. The difference between this mileage and that stated in the Annual Review for 1910 is accounted for from the fact that the latter included the mileage of the through route between Habana and Santiago which passes over the lines of three companies.



STREET SCENE IN MATANZAS, CUBA.

This view is typical of many towns in Latin America, and the milkman seen mounted on the pony with his milk cans slung on either flank is a sight that is always novel to the northern visitor.

The Cuban Central Railway runs from the ports of Concha and Caibarien, on the north coast, and connects these two ports with Cienfuegos, on the south coast. A portion of this system is used to form part of the through line from Habana to Santiago.

The main line of the Western Railway of Habana serves the famous tobacco district of Vuelta Abajo and extends through the Province of Pinar del Rio.

The Habana Central is an electric suburban line extending from Habana to Guines and Guanajay, each about 30 miles from the capital.

All the railroads of the Republic are owned and operated by private companies, but the first railway above mentioned was originally projected by the Government. Although all the lines try to establish direct connections with Habana, the capital, yet that place is not the center of railway activity, because the tendency is becoming more pronounced to connect the main trunk line and distributing areas of the interior of the island with the nearest seaport. In this way the increasing production of Cuba can reach the consuming markets in the quickest possible manner, and passengers as well as importations can be brought with the least inconvenience from foreign shores.

There was much active construction work on the railroads during the year, and a number of new concessions were granted. The branch lines of the Cuba Railroad from Marti to Bayamo and Manzanillo and from San Luis to Bayamo, a total of 136 miles, were opened to traffic, thus putting the port of Manzanillo into rail communication with the rest of the island and opening up a large section of country in the extreme southwestern part. By the decree signed by the President in August, Casilda, on the south coast, and Trinidad, further inland, will also be placed in touch with the other cities of Cuba, as a new corporation is to take over the old Trinidad Railway and improve it, making a connection at Placetas del Sur with the main line of the Cuba Railroad. Decrees were also signed for the construction of lines from Sagua la Grande to Corralillo, by way of Rancho Veloz, and from Cifuentes to La Esperanza via San Diego del Valle.

Preliminary steps were taken during the year and the plans have since been approved for the construction of a great railway station in the city of Habana to cost about $3,000,000. This is to be built at the upper end of the bay and three new wharves, to cost $1,000,000, will also be constructed. The building, which is to be constructed of American terra cotta, will be 240 feet long. The main waiting room will be 72 by 128 feet and will be finished in Italian marble with mosaic floor. When completed it will be one of the finest structures in the Republic.

Electricity is used as the motive power for the street railways of Habana, Santiago, and Camaguey, and an electric line is under construction in the city of Cienfuegos. The Habana Central lines and a section of the United Railways is also operated by the same power. The Cienfuegos, Palmira and Cruces Railway and Power Co. has commenced work on an electric railroad and power enterprise which is to connect a number of the cities in the Province of Santa Clara and furnish power for electric light and other purposes, using the water power of a number of mountain streams. It is building the street railway in Cienfuegos, and will construct about 350 miles of railroad altogether.

Although there are a number of rivers in Cuba, some of them with a considerable volume of water, they are too short and usually too swift to be of any service to navigation. The largest of these, the River Cauto, is navigable for a distance of about 50 miles for light-draft vessels only, while the Sagua la Grande is navigable for about 20 miles, and several of the other streams are navigable only for a few miles inland.

THE PRESS OF CUBA.

Considerable investigation has been undertaken concerning the date of the introduction of the printing press into the island of Cuba. Good authority can be cited, however, for the year 1707, and the honor should be given to Habana, as there is record of a small booklet issued from the capital at that date. This places Cuba fifth on the list of countries in the new world to make use of the art of printing, preceded only by Mexico, Peru, the United States, Guatemala, and Paraguay.

The next date on which the printing press was used in Cuba was 1720. In 1735 another press was reported in Habana, and from 1760 to the present there seems to have been practically no interruption to its activity. The printing of books and special articles was very animated in 1791 and after, encouraged, too, by the fact that a press had been established in Santiago in 1771, although it did not keep busy until 1792. The study of Cuba itself, however, was a matter in which foreigners took far greater interest than did the natives, for books about the island appeared more numerously from European presses, while local literature was confined to history and poetry, or to polemical discussion. From the beginning of the nineteenth century until the present the press made its way slowly over the island, meeting, it must be acknowledged, much opposition on the part of the colonial government.

The first periodical publication in Cuba was the Gazeta de la Habana, issued in May, 1764, which appeared Mondays, and contained political and commercial notes with various announcements of the Government. This paper reappeared in 1782–83 as the official organ of the Government. (The Gazeta de Madrid (in Spain) had been issued since 1661.) In the same year, 1764, a small but unofficial paper was issued for general reading on Wednesdays, in imitation of and therefore having the same name as the similar sheet, El Pensador, in Madrid.

More like a newspaper was the Papel Periódico de la Habana, the first number of which was dated October 24, 1790, and which was at the beginning a weekly, then from 1793 to 1805 a semiweekly, Sundays and Thursdays, when it came out three times a week as the Aviso, until its end, on September 1, 1810. This was really the original literary-economic periodical in Cuba. The cities of the island followed the lead of Habana but slowly. Santiago saw its first paper in 1805, Puerto Principe and Matanzas in 1813, Cienfuegos in 1845, and Guantanamo in 1871, the other places of any importance adding the newspaper to their life as occasion permitted.

In 1800 only three periodicals existed in Cuba. In 1831 there were 13, in 1860 the number had increased to 34, in 1890 to 135, in 1894 to 210, and at the present time undoubtedly the list includes upward of 300, published in all parts of the Republic. Habana can claim more periodical publications than any other one city, the number being above 50, but 75 towns outside the capital have been the local publication center of papers, many of them supporting several, and as the interior of the island becomes more thickly inhabited, with a higher standard of living and a more acute national spirit, the newspaper press is sure to attain greater proportions.

The usual daily papers of Habana measure 15 or 16 inches by 23 or 24 inches, and have 8 to 12 pages of 6 to 7 columns. The first page has cable and important home news, perhaps a cartoon, stock-market reports, and a few advertisements. As a rule, however, it is the last page on which the latter are most generously displayed. Advertisements find space, nevertheless, on the inside pages, and being mixed with reading matter there they are quite prominent. Considerable pictorial display is used also, in advertisements, and nothing is neglected in making them attractive and interesting. The papers in other cities are smaller than those in the capital, but follow the same general characteristics.

The circulation is a variable quality—that of the very smallest papers is sometimes no more than 1,000 copies, while that of the large metropolitan sheets may go as high as 25,000. The advertising rates are naturally in proportion. The column inch is the unit, and for this in local papers 10 cents gold is a common price to pay. The greater the circulation and the more publicity the paper has, the higher the rate, until 40 and 50 cents is asked, with corresponding figures for frequent insertions and larger space occupied.

UNITED STATES

FINANCE.

The ordinary receipts of the Federal Government for the year 1910 were $689,686,074.27, and the ordinary disbursements for the same period were $653,560,183.66, showing a surplus of $36,125,890.61. The figures for the preceding year were: Receipts, $637,773,165.36; expenditures, $670,506,889.07; deficit, $32,733,723.71.

The ordinary Federal receipts for the two years were derived from the following sources:

	1909	1910
Customs	$329,343,474.99	$328,003,676.16
Internal revenue	254,977,391.26	308,816,173.43
Post office	203,562,383.00	224,128,657.00
Miscellaneous	53,452,299.11	52,866,224.68
Total	841.335,548.36	913,814,731.27

The ordinary Federal expenditures for the two years were as follows:

	1909	1910
Civil and miscellaneous	$186,153,222.85	$178,243,733.10
War Department	164,386,429.45	154,128,064.24
Navy Department	121,472,363.80	122,223,185.95
Post Office	221,004,102.00	229.977,224,00
Indians	13,977,774.99	19,045,476.78
Pensions	162,799,115.19	158,607,185.84
Interest on public debt	21,717,982.79	21,312,537.75
Total	891,510,991.07	883,537,407.66

PRESIDENT WILLIAM H. TAFT.

The expenditures on account of the Panama Canal for 1910, not included in the above statement, were $37,522,360. The expenditures for the preceding year were $33,521,342.18.

DEBT.

The total outstanding debt of the United States on December 31, 1910, was as follows:

Interest-bearing debt	$913,317,490.00
Debt on which interest has ceased	1,995,045.26
Debt bearing no interest	387,919,402.43
Total	1,303,231,937.69

The interest-bearing debt is of the following issues:

Loan.	Rate.	Amount issued.	Amount outstanding.
	Per cent.		
Consols of 1930	2	$646,250,150	$646,250,150
Loan of 1908-1918	3	198,792,660	63,945,460
Loan of 1925	4	162,315,400	118,489,900
Panama Canal loan:			
Series 1906	2	54,631,980	54,631,980
Series of 1908	2	30,000,000	30,000,000
Total	....	1,091,990,190	913.317,490

The debt on which interest has ceased represents various issues of bonds already due which have never been presented for redemption.

The noninterest-bearing debt is represented by paper currency, unsecured by deposits of gold or silver bullion, and is as follows:

United States notes (greenbacks)	$346,681,106.00
Old demand notes	53,282.50
National bank notes, redemption account	34,326,668.00
Fractional currency	6,858,435.93
Aggregate of debt bearing no interest	387,919,402.43

The cash in the Treasury on December 31, 1910, not including trust funds held for the redemption of gold and silver certificates and Treasury notes, amounted to $374,149,447.18.

The amounts of the trust funds and of the gold and silver certificates and Treasury notes, for the redemption of which the fund is held, were as follows:

	In circulation.	In the Treasury.	Outstanding.
Gold certificates	$849,174,639	$73,681,030	$922,855,669
Silver certificates	474,333,499	11,237,501	485,571,000
Treasury notes of 1890	3,461,493	10,507	3,472,000
Aggregate of certificates and Treasury notes, offset by gold and silver in the Treasury	1,326,969,631	84,929,038	1,411,898,669

FOREIGN COMMERCE.

The total foreign trade of the United States for the year 1910 amounted to $3,427,415,895, of which $1,562,924,251 was imports, and $1,864,491,644 was exports. The figures for the preceding year, 1909, were: Imports, $1,475,612,580; exports, $1,728,203,271; total, $3,203,815,851. There was, therefore, for the year an increase in imports of $87,311,671; of exports, $136,288,373, a total increase of $223,600,044.

IMPORTS.

The imports by world divisions for the last three years were as follows:

World divisions.	1908	1909	1910
Europe	$548,882,652	$763,617,523	$790,154,694
North America	224,623,181	277,862,210	324,212,684
Asia and Oceania	195,283,552	223,250,726	239,732,090
South America	132,431,434	193,202,131	189,466,428
Africa	15,153,268	17,588,134	19,358,355
Total	1,116,374,087	1,475,520,724	1,562,924,251

The imports from the principal European countries for the three years were as follows:

Countries.	1908	1909	1910
United Kingdom	$172,351,413	$247,465,112	$270,889,409
Germany	128,069,164	161,951,687	166,536,719
France	89,150,290	131,982.748	121,810,225
Italy	43,468,077	50,208,431	49,296,827
Belgium	20,218,408	36,236,568	37,559,056
Netherlands	19,778,274	30,905,712	30,682,712
Switzerland	21,175,876	25,814,662	25,512,309
Spain	12,104,703	15,578,072	20,345,333
Austria-Hungary	13,583,802	17,364,703	18,022,396
Russia in Europe	8,123,458	15,082,602	12,687,797
Sweden	3,837,604	5,652,197	8,257,926
Turkey in Europe	4,333,627	7,373,303	7,580,474
Norway	3,651,120	5,680,643	7,288,674
Portugal	5,025,214	6,282,811	7,246,359

The imports from the principal North American countries for the three years were as follows:

Countries.	1908	1909	1910
Canada	$71,363,603	$87,310,881	$103,256,955
Cuba	79,114,972	107,334,716	127,827,395
Mexico	42,768,972	52,578,454	61,092,502
British West Indies	10,972,009	11,359,440	11,219,027
Costa Rica	4,004.629	3,361,838	3,529,945
Panama	1,447,525	1,973,001	2,868,906
Dominican Republic	5,279,477	2,767,338	2,840,952
Honduras	1,946,838	1,982,361	2,522,566
Guatemala	1,903,911	3,121,651	1,986,150
Newfoundland and Labrador	1,305,435	1,069,825	1,564,605
Nicaragua	1,034,131	1,097,922	1,316,416
Salvador	1,033,350	924,823	1,241,128
British Honduras	830,241	976,230	1,023,169
Haiti	447,186	681,919	831,465
Dutch West Indies	265,069	342,020	303,684
Danish West Indies	391,839	403,013	139,620
French West Indies	53,397	48,582	46,989

The imports from the principal countries of Asia and Oceania for the three years were as follows:

Countries.	1908	1909	1910
Japan	$63,918,330	$68,116,656	$73,763,695
British East Indies	53,172,235	69,438,377	70,308,967
China	22,874,392	29,909,694	34,521,525
Philippine Islands	9,243,244	13,556,916	18,040,745
British Oceania	13,668,728	18,258,773	17,883,926
Dutch East Indies	22,294,772	10,389,864	9,972,617
Turkey in Asia	5,744,483	7,143,612	7,428,280
Hongkong	1,896,131	1,851,609	2,895.575
Aden	1,258,733	2,016,297	1,936,787
Russia in Asia	377,682	1,154,408	1,140,468

The imports from South America for the three years were as follows:

Countries.	1908	1909	1910
Brazil	$81,039,224	$117,062,725	$103,716,231
Argentina	13,155,468	27,080,231	32,050,322
Chile	12,494,122	16,700,994	20,381,158
Peru	5,857,221	7,164,364	8,507,763
Colombia	6,897,493	7,303,503	7,703,281
Venezuela	7,028,180	7,772,851	7,285,634
Uruguay	2,106,943	5,708,814	4,877,412
Ecuador	2,196,131	2,832,819	3,512,444
Dutch Guiana	787,386	996,026	863,090
British Guiana	821,282	533,545	495,164
French Guiana	29,753	26,698	46,597
Paraguay	16,347	19,338	26,987
Bolivia	385	223	345
Falkland Islands	1,499	....	....
Total	132,431,434	193,202,131	189,466,428

The imports from the principal countries of Africa for the three years were as follows:

Countries.	1908	1909	1910
Egypt	$12,049,918	$12,665.454	$13,507,873
British South Africa	1,784,680	1,998,768	2,070,119
British East Africa	547,814	973,035	1,046,433
German Africa	....	208,302	949,819
Morocco	153,216	358,179	458,757
French Africa	387,774	767,737	551,367
British West Africa	90,609	209,203	339,139

The following table shows the principal articles of import for the years 1909 and 1910:

	1909	1910		1909	1910
Sugar	$90,296,896	$113,888,628	Cotton, raw	$15,058,262	$17,458,033
Rubber, crude	83,682,013	110,408,359	Tea	16,553,032	16,631,486
Hides and skins, other than fur skins	103,671,277	86,107,728	Nitrate of soda	13,281,629	16,601,328
Coffee	86,524,006	73,735,555	Leather and manufactures	16,270,407	16,558,059
Raw silk	75,512,401	70,026,994	Furs and skins, undressed	12,706,952	16,337,283
Cotton, manufactured	69,744,378	66,971,878	Fish	12,748,378	14,767,315
Manufactured fibers (except cotton)	54,860,696	56,564,538	Nuts	11,134,892	13,593,043
Iron and steel and manufactures	35,150,620	54,947,337	Fruits other than bananas	11,596,720	13,574,791
Wood and manufactures of	50,293,509	54,489,711	Breadstuffs	13,447,396	13,268,819
Wool, unmanufactured	55,530,366	36,102,447	Meat and dairy products	9,862,037	13,238,118
Tin, unmanufactured	27,559,937	33,921,449	Gums	13,241,060	12,476,893
Silk manufactures	32,707,982	33,884,498	Bananas	11,892,073	12,433,334
Oils	18,510,197	32,344,291	Cacao, crude	13,358,534	12,065,738
Copper and manufactures	30,608,120	31,667,078	Earthen, stone, and china ware	10,542,878	11,319,526
Unmanufactured fibers (except cotton)	33,511,696	28,906,170	Feathers, natural and artificial	12,005,844	11,201,383
Diamonds, cut	27,369,405	25,672,639	Fertilizers, other than nitrate	6,505,090	9,438,417
Leaf tobacco	25,897,650	24,709,939	Furs and skins, dressed or manufactured	11,338,726	9,327,839
Wool, manufactured	22,058,711	21,587,496	Diamonds, uncut	8,789,649	9,204,134
Spirits, wines, etc	26,565,661	20,053,644	Copper ore, matte, and regulus	9,113,254	9,182,161
Art works	16,845,919	19,447,763	Vegetables	13,189,603	8,700,100
Paper and manufactures	18,149,343	18,588,886			
Flaxseed	2,156,999	18,007,305			

In 1910 the greater amounts of the leading articles as above enumerated were imported from the countries as stated below:

Sugar (all cane, except beet, $43): From Cuba, $100,104,413; Philippine Islands, $6,502,354, and Dutch East Indies, $5,008,186. Rubber, crude (India rubber, $98,007,295; guayule, $5,666,451; scrap and refuse, $3,007,530; balata, $340,569; gutta-percha, $184,035; and gutta-joolatong, $3,202,479). Of India rubber, from Brazil, $41,582,766; United Kingdom, $21,849, 471; Mexico, $7,374,825; Germany, $7,716,050; Belgium, $5,161,777; France, $4,597,834; East Indies, $4,329,736; and from South America other than Brazil, $2,453,012.

Hides and skins other than fur skins—Cattle hides, $32,925,375: From Argentina, $9,942,219; Mexico, $3,829,114; Canada, $3,255,956; Uruguay, $2,378,450; France, $1,933,842; and from Belgium, $1,267,409. Goatskins, $27,223,492, of which from East Indies, $8,543,786; China, $3,932,804; Mexico, $2,724,506; Brazil, $2,388,274; Aden, $1,397,076; Africa, $1,214,595; United Kingdom, $1,162,203; Russia, $1,122,413; and from Argentina, $1,097,264. Calf and kip skins, $11,814,440: From Russia, $3,769,901; Germany, $2,320,106; Canada, $935,024; and from South America, $922,753. Sheepskins, $9,869,596: From United Kingdom, $4,981,025; Australia, $1,009,652; Asia, $893,213; Russia, $645,535; and from Argentina, $557,387.

Coffee: From Brazil, $55,438,676; Venezuela, $4,328,082; Colombia, $4,138,643; Central America, $3,234,677; Mexico, $3,030,030; and from East Indies, $1,760,597.

Silk, raw: From Japan, $43,744,447; China, $11,613,009; Italy, $10,974,475; and France, $1,081,020.

Cotton, manufactured—Of cloths, $8,357,305: From the United Kingdom, $6,607,795; France, $773,295. Of knit goods, $5,313,958: From Germany, $4,785,499. Of laces, embroideries, trimmings, etc., $35,927,461: From Switzerland, $14,064,626; France, $8,288,599; Germany, $6,806,949; and United Kingdom, $5,581,753. Manufactured fibers (except cotton)—Of burlap, $21,329,239: From East Indies, $17,177,444; United Kingdom, $4,017,854. Of linens (flax, hemp, or ramie), $19,463,568: From the United Kingdom, $14,997,718; Germany, 2,041,041; and from Belgium, $1,620,953.

Wood and manufactures of—Mahogany (in logs), $3,477,658: From the United Kingdom, $1,355,623; Mexico, $846,291; and from Central America, $619,639. Lumber, $17,764,049: From Canada, $17,429,124. Wood pulp, $13,296,500: From Canada, $4,966,536; Germany, $2,899,259; Norway, $2,654,966; and from Sweden, $1,979,760.

Iron and steel and manufactures of—Ore, $7,832,225: From Cuba, $4,459,789; Sweden, $1,391,976; and from Spain, $1,040,589. Pig iron, $6,549,938: From the United Kingdom, $5,188,410. Tinplates, $4,502,862: From the United Kingdom, $4,473,881.

Wool, unmanufactured—Clothing wools, $21,040,633: From Australia, $7,310,772; United Kingdom, $5,360,133; Argentina, $5,192,006; and from Uruguay, $1,625,843. Combing wools, $4,578,781: From the .United Kingdom, $3,119,130; and from South America $667,204. Carpet wools, $10,483,033: From China, $3,674,093; United Kingdom, $2,897,940; Russia, $1,417,532; Turkey in Asia, $567,410; and from Argentina, $298,098.

Tin, unmanufactured: From the United Kingdom, $20,836,168; Straits Settlements, $9,971,179; and Germany, $1,538,303.

Silk manufactures—Ready-made clothing, $5,740,189: From France, $2,820,363; Germany, $1,198,763; and from the United Kingdom, $1,064,741. Dress goods, $9,747,167: From France, $5,459,689; Japan, $2,048,806; and from Switzerland, $1,223,043. Laces and embroideries, $4,488,040: From France, $3,349,723.

Copper and manufactures—Pigs, ingots, plates, and bars, $31,620,689: From Mexico, $10,004,799; Peru, $4,993,864; Canada, $3,657,833; Spain, $3,185,855; Australia, $2,800,985; Japan, $2,321,298; and from the United Kingdom, $2,235,227.

Unmanufactured fibers (except cotton)—Flax, $3,263,137: From the United Kingdom, $1,180,682; Belgium, $1,076,970; and from Russia, $609,604. Jute and jute butts, $3,394,331: From the East Indies, $3,165,101. Manila, $8,670,430: From the Philippine Islands, $8,662,926. Sisal, $10,850,215: From Mexico,$10,249,473.

Leaf tobacco—Cigar wrappers, $5,787,092: From the Netherlands, $5,526,178. Other leaf, $18,922,847: From Cuba, $12,654,336; Turkey, $4,260,795; and from Germany, $1,439,267.

Cotton, raw: From Egypt, $12,685,376; United Kingdom, $2,175,435; Asia,$1,422,088; and Peru, $956,031.

Bananas: From Central America, $6,765,639; British West Indies, $3,932,388; and Cuba, $716,719.

Cacao: From British West Indies, $3,748,696; Dominican Republic, $2,066,197; Portugal, $1,840,165; Ecuador, $1,592,455; and Brazil, $833,441.

The receipts of merchandise from foreign countries at the principal ports of entry for the years 1909 and 1910 were:

Ports of entry.	1909	1910
Atlantic coast:		
New York	$891,527,678	$919,375,357
Boston	127,025,654	121,448,133
Philadelphia	78,003,464	89,641,472
Baltimore	27,418,567	32,381,566
Perth Amboy	7,241,284	8,948,034
Gulf coast: New Orleans	53,570,687	61,188,259
Mexican border:		
Arizona	9,256,879	9,574,670
Saluria	5,248,034	6,302,451
Pacific coast:		
Seattle	$28,611,494	$33,837,633
San Francisco	51,468,597	50,649,435
Northern border:		
Chicago	24,635,604	27,700,664
Oswegatchie	20,736,761	22,178,554
Buffalo	9,606,468	14,443,595
Champlain	8,167,527	9,532,261
Detroit	7,100,659	8,042,901
Minnesota	6,153,289	6,853,751
Memphremagog	4,864,142	6,451,795
Huron	5,315,434	6,038,201

EXPORTS.

The exports by world divisions for the last three years were:

World divisions.	1908	1909	1910
Europe	$1,233,974,092	$1,169,672,726	$1,192,695,728
North America	294,002,660	344,761,296	425,576,553
Asia and Oceania	129,852,286	113,130,487	124,859,916
South America	76,597,635	83,509,838	100,303,616
Africa	18,408,774	17,124,298	21,055,831
Total	1,752,835,447	1,728,198,645	1,864,491,644

The exports to the principal European countries for the three years were:

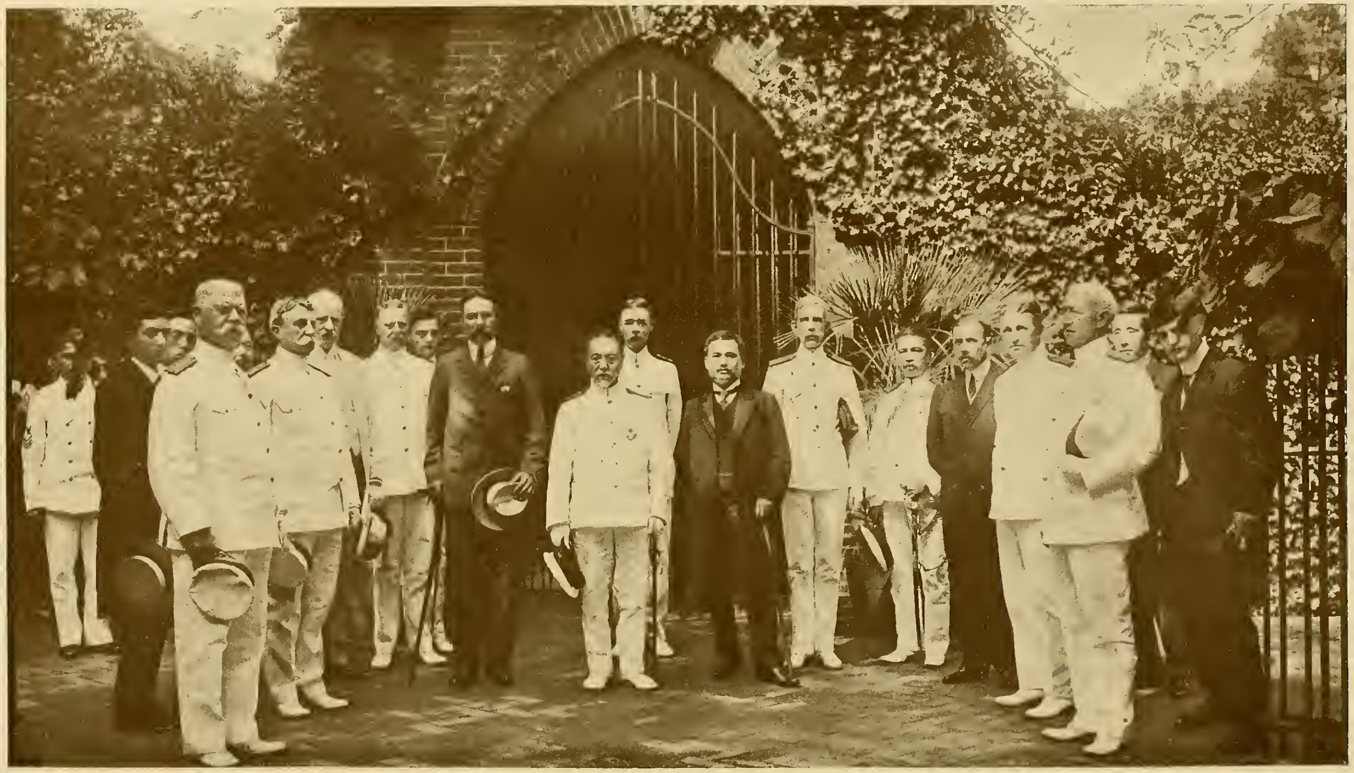
Countries.	1908	1909	1910
United Kingdom	$554,747,076	$521,281,999	$550,626,404
Germany	258,018,076	247,310,484	258,307,490
France	116,855,301	126,361,959	115,709,548
Netherlands	98,329,347	89,121,124	84,867,181
Italy	61,035,561	56,850,502	52,697,405
Belgium	47,662,866	44,477,380	38,910,722
Spain	21,303,829	17,222,347	22,539,559
Russia in Europe	17,961,361	15,247,047	18,463,598
Austria-Hungary	15,149,433	15,883,968	16,241,191
Sweden	7,652,535	6,630,429	6,581,177
Norway	6,271,098	6,250,498	6,384,681
Portugal	3,761,754	3,402,143	3,128,380
Turkey in Europe	1,544,677	2,074,510	1,572,976
Switzerland	655,853	764,035	775,540

The exports to the principal North American countries for the three years were:

Countries.	1908	1909	1910
Canada	$152,624,758	$187,729,383	$241,809,233
Mexico	46,462,044	53,513,347	63,858,939
Cuba	42,451,224	48,217,689	57,783,617
Panama	16,799,630	19,008,196	21,530,112
British West Indies	12,068,469	11,431,536	11,302,871
Haiti	3,500,775	4,443,988	4,815,585
Newfoundland and Labrador	4,172,963	3,708,300	4,350,735
Dominican Republic	2,723,408	2,500,959	3,699,637
Costa Rica	2,196,459	2,841,343	3,178,835
Guatemala	1,743,839	1,752,696	2,313,496
Nicaragua	1,297,163	1,475,162	1,861,328
Honduras	1,540,280	1,636,678	1,707,692
Salvador	1,404,573	1,470,914	1,560,674
French West Indies	1,405,107	1,288,858	1,533,183
British Honduras	1,164,638	1,154,845	1,331,302
Danish West Indies	674,938	709,601	779,914
Dutch West Indies	687,531	593,984	726,776

The exports to the principal countries of Asia and Oceania for the three years were

Countries.	1908	1909	1910
British Oceania	$32,792,642	$30,847,250	$38,345,781
Japan	33,624,781	23,471,837	26,566,178
Philippine Islands	9,911,197	13,791,595	19,941,539
China	24,941,129	19,791,796	16,710,289
British East Indies	11,675,659	9,709,232	10,002,167
Hongkong	8,177,302	7,437,627	5,849,470
Dutch East Indies	2,276,104	2,620,663	2,867,137
Russia in Asia	1,916,285	1,430,741	1,070,163
Turkey in Asia	524,341	794,740	897,996
Aden	1,506,835	947,676	645,571



Photograph by Harris-Ewing.

ADMIRAL COUNT TOGO AND PARTY AT THE TOMB OF WASHINGTON, MOUNT VERNON, VA.

Standing from left to right are: Rear Admirals Giles B. Harber and William P. Potter, Capt. Templin M. Potts, U. S. N.; Assistant Secretary of the Navy, Beekman Winthrop; Admiral Togo; Rear Admiral Charles E. Vreeland; Baron Yasuya Uchida, Ambassador of Japan to the United States; Rear Admiral Richard Wainwright; Third Assistant Secretary of State, Chandler Hale; Rear Admiral Reginald F. Nicholson; Capt. Frank E. Beatty, U. S. N.; Lieut. Col. Kazutsugu Inouye, Military Attaché of the Japanese Embassy. As the official guest of the United States Government, Admiral Heihachiro Togo, of the Japanese navy, spent several weeks during August visiting the principal cities throughout the United States. In Washington, New York, Boston, Philadelphia, and Baltimore many official and social functions were tendered in his honor.

The exports to South America for the three years were as follows:

Countries.	1908	1909	1910
Argentina	$33,519,955	$36,287,992	$42,776,982
Brazil	16,973,977	19,765,836	24,988,337
Chile	5,373,911	6,787,537	9,991,278
Peru	5,815,495	4,371,088	4,851,410
Colombia	3,690,014	3,472,632	4,636,682
Uruguay	3,134,694	4,016,105	4,610,715
Venezuela	2,566,022	2,529,669	3,086,126
Ecuador	1,814,434	2,202,849	2,008,838
British Guiana	2,018,462	2,028,480	1,706,177
Bolivia	687,307	895,838	703,644
Dutch Guiana	599,439	717,415	642,056
French Guiana	347,698	363,581	240,223
Paraguay	55,229	69,674	60,581
Falkland Islands	998	1,142	567
Total	76,597,635	83,509,838	100,303,616

The exports to the principal countries of Africa for the three years were:

Countries.	1908	1909	1910
British South Africa	$7,167,813	$8,453,439	$11,411,609
British West Africa	2,051,367	2,167,804	2,329,963
Egypt	1,766,232	860,396	1,321,634
French Africa	1,468,405	1,622,087	1,184,874
British East Africa	434,811	692,199	479,785
German Africa	105,852	199,219	208,688
Morocco	20,063	89,120	22,466

The following table shows the principal articles of export for the years 1909 and 1910:

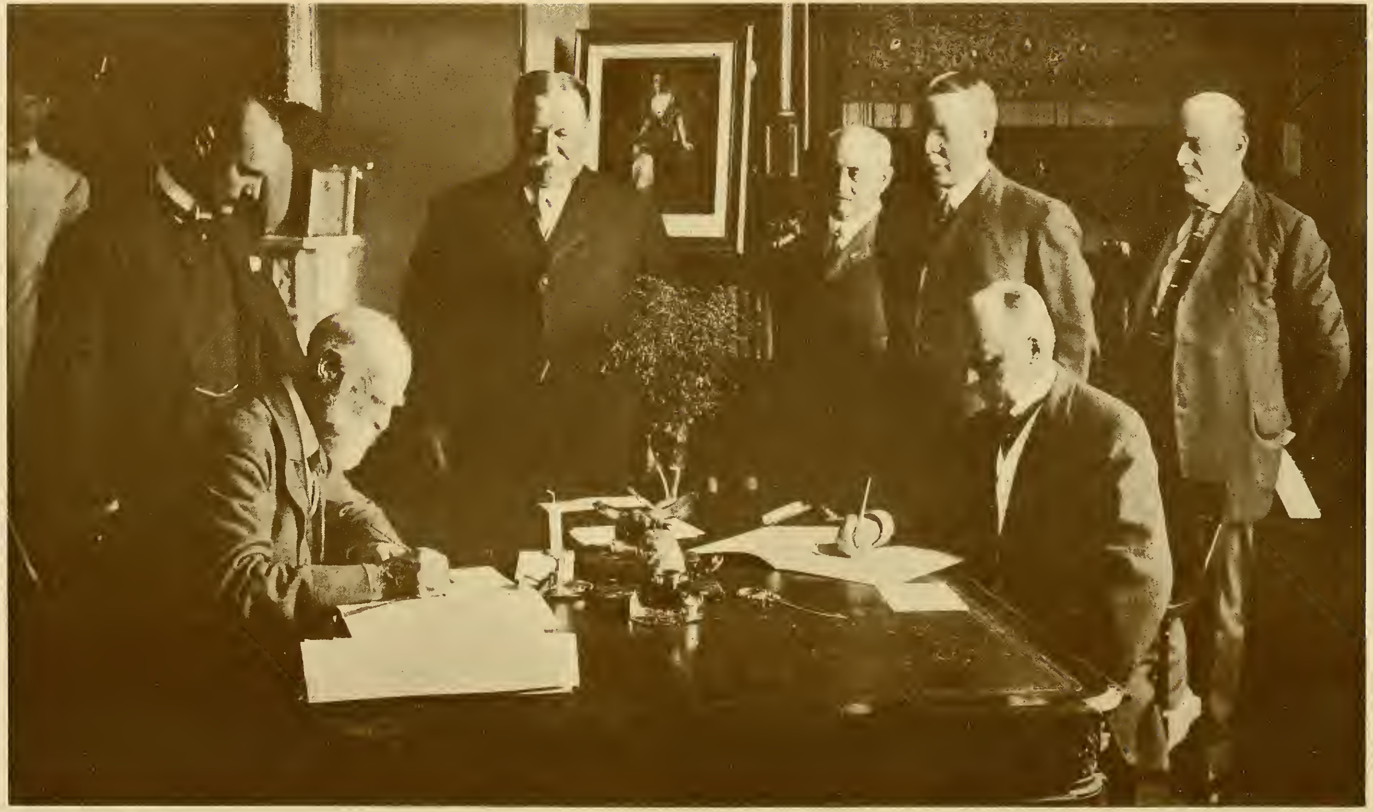
	1909	1910
Cotton, raw	$461,919,568	$530,824,222
Iron and steel, and manufactures of	159,039,719	203,346,067
Meat and dairy products	151,964,537	129,522,085
Oils	126,350,916	109,954,928
Breadstuffs	139,779,080	109,096,306
Copper, and manufactures of	93,919,956	96,031,885
Wood, and manufactures of	72,313,280	85,789,033
Leather, and manufactures of	47,146,415	53,511,761
Coal and coke	41,674,191	44,524,085
Leaf tobacco	36,844,121	36,070,695
Cotton, manufactures of	34,414,860	35,578,065
Agricultural implements	27,327,428	31,291,351
Cars, carriages, and other vehicles	16,774,036	25,610,243

	1909	1910
Fruits and nuts	$18,707,670	$23,023,586
Naval stores	16,103,076	22,153,092
Chemicals, drugs, and medicines	20,330,335	21,713,329
Oil cake and meal	20,245,818	20,791,222
Paper, and manufactures of	15,280,541	17,960,809
Live animals	20,795,138	15,292,411
Furs and fur skins	11,506,355	13,462,117
Instruments and apparatus, scientific	9,136,892	11,460,773
Rubber, manufactures of	8,874,485	11,224,936
Sugar and molasses	5,487,551	8,829,333
Phosphate rock	7,644,368	8,234,276
Fish	8,544,016	8,404,177
Musical instruments	2,971,137	3,256,391
Exports of foreign merchandise	27,476,660	37,235,975

In 1910 the greater amounts of the leading articles as above enumerated were exported to the countries as stated below:

Cotton, raw: To the United Kingdom, $243,233,628; Belgium, $7,523,526; France $61,650,772; Germany, $138,595,991; Italy, $28,244,154; Russia in Europe, $5,730,432, Spain, $16,025,323; other Europe, $8,648,480; Canada, $10,730,646; Mexico, $700,765 and to Japan, $9,625,941.

Iron and steel, and manufactures of: Steel rails, $10,162,522, of which to Canada, $750,424; Central American States, $528,132; Mexico, $1,824,996; West Indies and Bermuda, $1,173,119; South America, $2,835,954; Japan, $531,219, and to other Asia and Oceania, $2,271,578. Structural iron and steel, $7,127,673, of which to Canada, $3,346,393; Mexico, $1,258,531; Cuba, $556,797, and South America, $702,605. Wire, $9,198,005, of which to Canada, $2,077,092; Mexico, $917,349; Cuba, $604,297; Argentina, $1,160,366; Brazil, $454,507; other South America, $764,210, and Australia, $1,442,898. Builders' hardware and tools, $15,844,897. Electrical machinery, $7,156,688, of which to the United Kingdom $373,935; France, $260,076; other Europe,



Photograph by Harris-Ewing.

SIGNING THE GENERAL ARBITRATION TREATY BETWEEN THE UNITED STATES, GREAT BRITAIN, AND FRANCE, AT THE WHITE HOUSE, THURSDAY, AUGUST 3, 1911.

Left to right, around the table: Right Hon. James Bryce, Ambassador of Great Britain to the United States; Esmond Ovey, Esq., Second Secretary of the British Embassy; President William H. Taft; Viscount de Saint Phalle, Secretaire Archiviste, who acted as a witness for France; Chandler P. Anderson, Esq., Counsellor of the Department of State; Sydney Y. Smith, Chief of the Diplomatic Bureau of the Department of State; Philander C. Knox, Secretary of State of the United States. Hon. J. J. Jusserand, the French Ambassador to the United States, had officially signed the treaty for France at Paris.

$485,414; Canada, $1,577,483; Mexico, $1,242,132; Cuba, $181,205; Brazil, $375,825; other South America, $343,889, and to Japan $1,008,553. Metal-working machinery, $7,636,659. Mining machinery, $6,586,044. Sewing machines, $8,142,765, of which to the United Kingdom, $1,760,814; Germany, $1,097,831; Netherlands, $462,925; Canada, $442,247; Mexico, $518,360; Cuba, $365,088; Argentina, $618,137; Brazil, $919,173, and to other South America, $640,707. Locomotives, $2,820,352, of which to Canada, $351,907; Central American States, $163,028; Mexico, $293,185; Cuba, $141,175; Brazil, $903,488; Argentina, $95,323; other South American countries, $94,476, and to the Chinese Empire, $201,920. Typewriters, $8,848,464, of which to the United Kingdom, $2,137,273; France, $853,721; Germany, $1,060,528; Russia in Europe, $692,761; other Europe, $1,190,195; Canada, $530,543; Mexico, $346,341; Cuba, $98,836, and to South America, $812,563. Pipes and fittings, $9,544,119, of which to Belgium, $606,023; Canada, $1,371,399; Central America, $436,333; Mexico, $1,901,777; Cuba, $883,465, and to Japan, $863,228.

Oils: Mineral crude, $5,404,253, of which to France, $908,479; other Europe, $467,376; Canada, $1,351,187; Mexico, $1,163,977, and Cuba, $356,696. Mineral refined: Naphthas, $8,407,102. Illuminating oil, $55,642,368, of which to the United Kingdom, $8,557,528; Belgium, $1,788,262; Denmark, $1,126,889; France, $1,759,667; Germany, $5,507,980; Italy, $1,222,454; Netherlands, $4,674,929; Sweden, $1,256,158; other Europe, $1,200,464; Canada, $486,194; Central America, $308,910; Argentina, $2,219,067; Brazil, $3,132,565; Chile, $874,327; other South America, $1,319,820; Chinese Empire, $5,365,268; British India, $2,228,450; Dutch East Indies, $1,281,135; Japan, $2,468,378; British Oceania, $2,719,574, and to British Africa, $1,232,153. Lubricating oil, $20,921,103, of which to the United Kingdom, $5,909,600; Belgium, $1,129,698; France, $1,890,887; Germany, $2,370,738; Italy, $854,600; Netherlands, $1,115,217; Canada, $766,943; Mexico, $285,684; Cuba, $369,321; Argentina, $584,569; Brazil, $389,271; Chile, $383,424; British East Indies, $894,386; Japan, $495,841; British Oceania, $610,150, and to British Africa, $349,914. Vegetable: Cottonseed, $13,186,692, of which to the United Kingdom, $2,058,601; Italy, $1,065,864, and to the Netherlands, $2,549,075.

Breadstuffs: Barley, $4,705,321. Maize, $28,019,716, of which to the United Kingdom, $5,802,756; Denmark, $1,417,523; Germany, $3,184, 454; Netherlands, $3,680,680; Canada, $5,557,199, and to Cuba, $1,628,949. Wheat, $23,468,723, of which to the United Kingdom, $10,556,261; Belgim, $2,017,950; France, $2,931,327; Germany, $1,601,681; Netherlands, $1,196,082; Canada, $1,063,403, and to Mexico, $2,296,660. Wheat flour, $42,990,645, of which to the United Kingdom, $13,300,016; Germany, $1,195,637; Netherlands, $3,832,297; Central America, $2,073,584; Cuba, $4,442,434; other West Indies, $3,919,437; Brazil, $2,616,057; other South America, $2,474,942; Hongkong, $2,801,775; Japan, $1,016,889, and to the Philippine Islands, $826,258.

Copper and manufactures of: Ore, matte and regulus, $1,049,086. Pigs, ingots, bars, and plates, $88,949,799, of which to the United Kingdom, $12,170,703; Belgium, $839,248; France, $14,760,269; Germany, $22,368,315; Italy, $4,447,032; Netherlands, $27,135,378; Russia in Europe, $874,978; other Europe, $5,489,908, and to Canada, $794,511. Manufactures, $5,132,287.

Wood, and manufactures of: Log, firewood, and timber, hewn and sawed, $14,858,998, of which to the United Kingdom, $5,571,597; France, $756,197; Germany, $1,245,638; Italy, $1,124,870; Netherlands, $1,525,973; Canada, $1,638,742; Central American States, $631,890; Mexico, $997,460, and to South America, $248,299. Lumber, $41,675,785, of which to the United Kingdom, $6,051,779; Belgium, $2,119,910; France, $785,085; Germany, $2,055,812; Italy, $964,399; Netherlands, $2,293,465; Canada, $7,670,201; Central America, $1,221,759; Mexico, $1,760,842; Cuba, $2,480,685; Argentina, $4,974,919; Brazil, $725,547; other South America, $1,520,882; Chinese Empire, $1,038,880, and to British Oceania, $2,803,350. Staves, $5,297,466. Furniture, $6,026,494, of which to the United Kingdom, $511,971; other Europe, $761,689; Canada, $915,132; Central America, $183,907; Mexico, $845,243; Cuba, $683,044; Argentina, $852,961; other South America, $399,814, and to Asia and Oceania, $444,079.

Leather and manufactures of: Sole leather, $8,419,475, of which to the United Kingdom, $6,965,633; Belgium, $306,608, and to Japan, $556,013. Glazed kid, $16,675,613. Boots and shoes, $13,216,237, of which to the United Kingdom, $1,717,373; Germany, $658,972; Canada, $1,492,455; Central American States, $987,423; Mexico, $1,650,740; Cuba, $3,138,109; South America, $800,037; and the Philippine Islands, $582,089.

Coal and coke: Coal (anthracite) $14,785,387, of which to Canada, $14,528,687. Bituminous, $26,685,405, of which to Canada, $17,986,316; Mexico, $1,827,002; Cuba, $2,329,830; and to the other West Indies, $1,317,379. Coke, $3,053,293.

Tobacco, leaf: To the United Kingdom, $12,249,430; to Belgium, $1,141,607; to France, $3,515,943; to Germany, $4,695,722; to Italy, $4,031,056; Netherlands, $2,016,182; Spain, $1,021,258; other Europe, $979,158; Canada, $1,672,254; South America, $378,580; British Oceania, $1,633,880; other Asia and Oceania, $784,278; British Africa, $670,345; and to other Africa, $701,022.

Cotton, manufactures of: Cloths, $20,271,204, of which to the United Kingdom, $297,432; Canada, $1,033,980; Central America, $1,648,155; Mexico, $227,398; Cuba, $879,183; other West Indies, $2,695,113; Chile, $724,042; Colombia, $842,165; other South America, $1,302,447; Aden, $587,760; Chinese Empire, $4,151,340; British East Indies, $605,380; British Oceania, $872,990; and to the Philippine Islands, $3,484,658. Clothing, $6,417,277. Waste, $3,599,231.

Cars, carriages, and other vehicles: Automobiles, $13,190,296, of which to the United Kingdom, $2,755,592; France, $753,204; Germany, $331,754; Italy, $377,750; other Europe, $764,463; Canada, $5,021,043; Mexico, $689,903; West Indies, $412,588; South America, $519,160; and to British Oceania, $748,933. Passenger and freight railway and tramway cars, $6,074,682, of which to Canada, $656,025; Central America, $790,953; Mexico, $1,783,685; Cuba, $1,202,603; Argentina, $311,352; and to other South America, $692,834.

Fruits and nuts: To the United Kingdom, $7,484,282; Germany, $3,278,458; Netherlands, $1,322,930; other Europe, $2,823,582; and to Canada, $6,183,012.

Naval stores: Rosin, $12,373,825, of which to the United Kingdom, $2,459,404; Austria-Hungary, $439,054; Germany, $3,932,035; Italy, $507,880; Netherlands, $1,051,164; Canada, $428,948; Argentina, $678,900; Brazil, $822,749; and to other South America, $270,256. Turpentine, $9,627,428, of which to the United Kingdom, $3,654,781; Belgium, $1,098,548; Germany, $1,592,818; Netherlands, $1,287,651; Canada, $560,408; and to South America, $693,432.

Oil cake and meal: Cottonseed, $10,122,274, of which to the United Kingdom, $1,282,308; Denmark, $3,611,445; Germany, $3,543,921; and to the Netherlands, $823,220. Flaxseed, $9,806,771, of which to the United Kingdom, $779,700; Belgium, $4,434,077; and to the Netherlands, $3,924,009.

The exports of merchandise to foreign countries from the principal ports of departure for the years 1909 and 1910 were:

Ports.	1909	1910	Ports.	1909	1910
Atlantic coast:			Pacific coast:		
New York	$627,782,841	$705,117,997	San Francisco	$31,100,309	$36,413,739
Baltimore	79,496,651	72,999,110	Seattle	26,518,274	32,187,901
Boston	72,936,869	69,483,136	Northern border:		
Philadelphia	80,650,274	66,290,344	Detroit	37,085,027	41,178,267
Savannah	66,932,973	62,283,108	Buffalo	30,241,830	39,999,699
Wilmington	23,310,070	27,404,766	Huron	21,858,064	24,290,655
Brunswick	17,486,173	13,933,368	Niagara	18,127,998	20,462,894
Gulf coast:			Champlain	15,169,502	20,265,851
Galveston	182,446,114	201,875,443	Minnesota	9,909,940	16,908,736
New Orleans	146,855,390	155,218,749	Memphremagog	11,770,063	15,898,950
Mobile	27,806,466	29,351,343			
Pensacola	20,971,670	20,379,458	North and South Dakota	10,511,820	15,820,844
Sabine	20,272,367	20,378,452	Cuyahoga	9,683,113	11,228,377
Mexican border: Corpus Christi	9,956,709	13,737,609			

CHILE

The Republic of Chile has an area of 291,500 square miles, with a population (1910) of about 3,500,000, or 12 per square mile. It extends from the Samu River to Cape Horn, occupying a long, narrow strip of land between the Andine mountain range and the Pacific Ocean, with a coast line of 2,625 miles and an average width of only 90 miles. The country is rich in minerals, the best known being nitrate, from which the fertilizer known as nitrate of soda is procured. Copper, gold, silver, and iron are also found. Agriculture, viticulture, apiculture, and fisheries thrive, and there are extensive forests of cabinet and other woods.

By the constitution adopted May 25, 1833, Chile has a republican form of government, with legislative, executive, and judicial branches. The legislative power is vested in the National Congress, consisting of a Senate and Chamber of Deputies; the former, in accordance with the new census, will be composed of 37 and the latter of 108 members. Senators are elected for a term of six years in the proportion of 1 for every 3 deputies, but the Senate is partially renewed every three years. Deputies are elected for three years by direct vote, 1 for every 30,000 inhabitants or fraction thereof not less than 15,000. All male Chileans of 21 years of age who can read and write and are registered are entitled to vote. Congress meets regularly from June 1 to September 1 each year at the national capital, Santiago. During the recess of that body a permanent committee consisting of 14 members, of which 7 are senators and 7 deputies, acts for Congress and is consulted by the President upon all matters of importance.

COAT OF ARMS OF CHILE.

The President is elected for five years by electors, who, in their turn, are chosen by direct vote. He can not serve for two consecutive terms, and may not leave the country during his term of office or for one year after its expiration except with the consent of Congress. His salary is 60,000 pesos (about $13,000) a year. He is assisted by a council of State, of 11 members, 6 of whom are appointed by Congress and 5 by the President; and also by a cabinet of 6 ministers, who are appointed by him but are responsible to Congress.

The President and his cabinet are as follows:

President, Dr. Ramon Barros Luco (inaugurated December 23, 1910).

Minister of Interior, Sr. Ramón Gutiérrez.

Minister of Foreign Affairs, Sr. Enrique A. Rodríguez.

Minister of Justice and Public Instruction, Sr. Benjamín Montt.

Minister of Finance, Sr. Pedro Montenegro.

Minister of War and Navy, Sr. Alejandro Hunneus.

Minister of Industry and Public Works, Sr. Enrique Zañartu.

The Department of Interior (Ministerio del Interior) has under its jurisdiction the government of the Republic as well as the various intendentes and governors of the territorial divisions. It has also charge of the postal and telegraph offices, bureau of statistics, police, charity, and sanitary institutions.

Under the direction of the Department of Foreign Affairs, which also includes the Subdivisions of Worship and Colonization (Ministerio de Relaciones Exteriores, Culto y Colonización), are conducted all diplomatic and consular intercourse as well as negotiations with foreign Governments. The division of worship has charge of the official churches subsidized and maintained by the Government. The colonization section seeks to promote immigration and colonization into the country, and toward that end is charged with the establishment of propaganda agencies in such places as it deems feasible.

PRESIDENT RAMON BARROS LUCO.

The Department of Justice and Public Instruction (Ministerio de Justicia e Instrucción Pública) is administered in two divisions. The section of justice is entrusted with the administration of all legal and judicial matters, and the keeping of the civil register. The division of education has under its supervision the various primary and secondary schools, institutions of higher education, the public libraries, museums, and universities.

The Department of Finance (Ministerio de Hacienda) administers the public revenue and the public debt, and prepares the annual budget. It has also charge of the customhouse service, the nitrate and guano deposits, the mortgage loan and the nitrate loan banks.

The Department of War and Navy (Ministerio de Guerra y Marina) is charged with the maintenance of the army and navy and all matters pertaining thereto. It also has under its direction the various military schools and academies.

The Department of Industry and Public Works (Ministerio de Indústria y Obras Públicas) has in its care the promotion and encouragement of various industries, the supervision of state and private railways and the registration of patents and trade-marks. The care of roads, bridges, and highways, the development of mining and agricultural possibilities, and the maintenance of experimental schools and farms all fall within the scope of the work of this department.

The judiciary consists of a national supreme court of 10 members, convening at Santiago, six courts of appeal, and minor courts. All judges hold office during good behavior.

The active army consists of 17,123 officers and men. Military service is compulsory, and the war strength of the Republic is estimated at 150,000. The navy has over 30 vessels, with a personnel of 6,084 officers and men.

There are 22,334 miles of telegraph lines in the Republic, of which the Government owns 16,513 miles, with 367 offices. Distributed over the country are 1,096 post offices. There is also an extensive wireless-telegraphy system, with nine stations, extending from Arica, the most northern point, to Punta Arenas, the most southern, a distance of 2,139 miles in a direct line.

The Republic is divided into 23 Provinces and 1 National Territory, which are again divided into departments, districts, and municipalities. The Provinces are governed by intendentes appointed by the President.

CHILE IN 1910.

The centennial year of the Republic was a favorable one in all respects. The 100 years of trial gave proof that a national feeling was firmly rooted in the hearts of the people, and a fair start has been made for industrial conquests in the future. The only dark cloud in 1910 was the sudden death of the President of the Republic, Sr. Montt, while on a visit abroad, and following soon after, the death of his successor, Sr. Albano.

The festivities of the centenary were held throughout the country, but additional ceremonies took place in Santiago, the national capital, and in Valparaiso, the chief seaport. Special ambassadors and envoys were sent by many foreign governments, and the President of the Argentine Republic, with a large suite, came in person to represent his people, between whom and those of Chile a strong and intimate tie was formed when they came to the support of each other in 1810.

With the nations of the world Chile remained on terms of peace. Delegates were sent by the Government to various foreign and international congresses, among them being the Fourth Pan American Conference in Buenos Aires and the Scientific Congress in Buenos Aires, as well as the centennial celebrations in Argentina and Mexico. Nominations were made for representation in congresses to be held during 1911.

In commercial development it is worth remarking that the increase in commerce with the United States was 39 per cent more than in

1909, for which both countries are to be congratulated. The total foreign commerce for the year was the highest in the history of Chile. Taking account of the growth of this commerce for the past 50 years, it is astonishing to note that it has increased nearly 500 per cent between 1860 and 1910. While it can not be expected that this ratio will be kept up for the next 50 years, there is reason to believe that the next decade will show equally important gains.

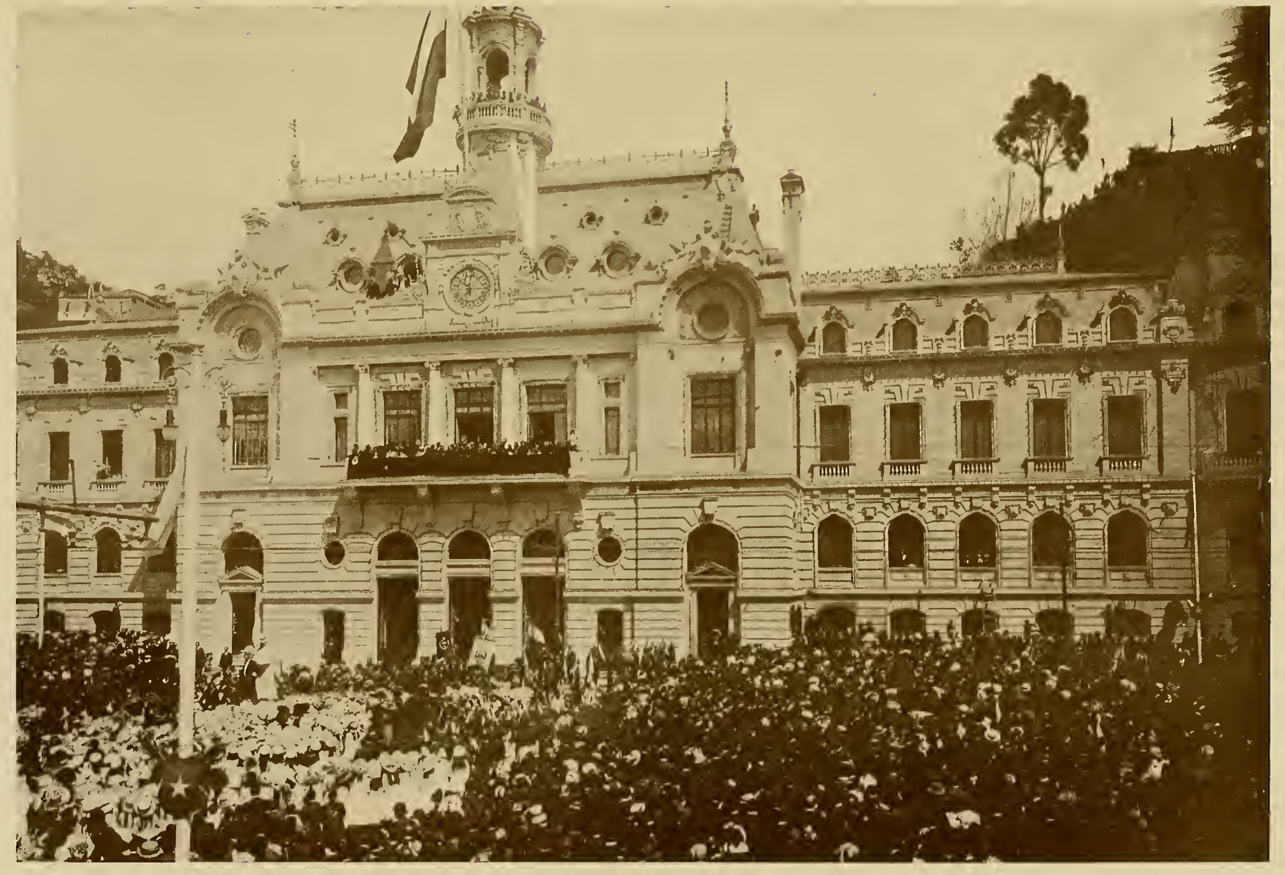
The finances of the Republic were in general satisfactory. Although the public debt was somewhat increased and new loans negotiated, the income necessary to meet obligations was provided, and the unusual amount of expenditure on public works, railways, especially the longitudinal railway, and the centennial celebration, explains the purposes to which the money was applied. A deficit was left at the end of the year, in the national treasury, but allowance was made to cover that in 1911.

The nitrate industry in 1910 was satisfactory. Almost all of the output was taken by agricultural and other consuming interests in the world, and the demand is increasing at the same rate as the production, which was greater than in 1909.

A commission was appointed to study needed improvements in the ports of Valparaiso and San Antonio; this work was finished and proposals have been distributed in eight capitals of Europe as well as in New York and Washington, to carry out the plans, which it is to be hoped can be begun before the end of 1911. The same commission is at work on the port of Arica and will thereafter take up Iquique and Antofagasta, and still later Valdivia, so that Chile has ahead of it the systematic care of its harbors to accommodate the rapidly growing commerce. In this connection it is worth noting that the large map of the Republic, drawn under Government supervision, is concluded and is about to be published in 22 sections.

At the close of the year there were 2,716 fiscal primary schools, with 4,829 employees, and an attendance of 258,875 scholars. In addition, the private schools receiving assistance from the Government had 36,577 scholars, and those receiving no assistance had 30,385. There were 15 normal schools for both sexes, with a matriculation of 2,222. In the 74 lyceums for men and women, 18,669 scholars were in attendance, while the two universities had a total of 2,490 matriculants. In addition, there were 2,296 scholars in the commercial institutes maintained by Government aid. There were 43 primary, 2 normal, and 9 schools for secondary education completed during the year.

The Government is anxious to encourage immigration and offers material inducements to settlers. During 1910 the number of immigrants arriving was 2,543, most of whom came from Spain and Italy.



THE GOVERNOR'S PALACE AT VALPARAISO, CHILE.

View of the new Intendencia, or Governor's Palace, at Valparaiso, taken on Children's Day during the Centennial Celebration.

The study of natural resources in agricultural, mineral, and forestal matters was advanced by commissions appointed to that end. Chile is desirous of introducing all methods which will add to her natural wealth under the proper rules of conservation, and much careful work is therefore already in hand or planned for the future.

FINANCE.

According to the message of President Sr. Don Ramón Barros Luco, presented to the National Congress at its opening, June 1, 1911, the ordinary revenues of the Government for the year 1910, amounted to 152,975,645.21 pesos paper and 82,764,423.27 pesos gold. During the year the treasury sold gold to the amount of 23,238,519.15 pesos, which sum produced 39,333,215.94 pesos in paper. This shows a gold premium of about 69.2.

The expenditures of the Government amounted to 60,677,704.30 pesos gold and 234,143,253.43 pesos paper as against receipts, after gold conversion as above, of 59,525,904.12 pesos gold and 192,308,861.15 pesos paper. There was, therefore, a deficit for the year of 1,151,800.18 pesos gold and 41,834,392.28 pesos paper. This deficit the President states was the result of expenditures made in public works, railroad building, the centennial expenses and initial expenses connected with the longitudinal railroad.

For the year 1909 there was a surplus of 9,005,143.81 pesos gold and a deficit of 35,782,111.90 pesos paper. These amounts, taken together with the deficit of 1910, show a surplus of 7,853.63 pesos gold and a deficit of 77,616,504.18 pesos paper. In his message the President converts the gold surplus into paper at a premium for gold of 65, producing thereby 12,958,016.98 pesos paper, which, subtracted from the deficit last given, shows a total deficit at the end of the year 1910 of 64,658,487.20 pesos paper.

Converted into United States currency, estimating the gold peso at 36.5 cents and the gold premium at 65, the revenues for the year 1910 amounted to $64,049,081.46, the expenditures to $73,942,687.83, and the deficit to $9,893,606.37. If the deficit of 1910 is added to the deficit of the preceding year, the total deficit amounts to $14,303,241.10.

The details of receipts and expenditures for 1910 were presented to the National Congress by the minister of finance on June 17, 1911.

The several sources of revenues and of expenditures were as follows:

REVENUES.

	Pesos paper.	Pesos gold.
Customhouse receipts	81,472,341.46	80,393,681.58
Post office and telegraph	4,330,453.00	....
Internal-revenue stamp tax	6,010,751.27	....
Mint profits	1,495,202.10	....
State railways	47,760,750.70	....
Miscellaneous internal revenues	11,906,146.68	2,370,741.69
Total	152,975,645.21	82,764,423.27
Equivalent to	$33,840,066.97	$30,209,014.49

The principal items of customhouse receipts were:

	Pesos paper.	Pesos gold.
Import duties	44,436,032.30	652.42
Surtax on imports	29,608,791.73	....
Export duties, nitrate	....	79,665,417.23
Export duties, iodine	....	727,115.13
Import duties on postal packages	3,252,883.11	496.80
Frontier customs	2,248,429.07	....

EXPENDITURES.

	Pesos paper.	Pesos gold.
Department of—		
Interior	29,208,789.69	3,014,675.52
Foreign relations	....	....
Public Worship and Colonization—		
Secretary of Foreign Relations	358,723.59	1,685,185.07
Secretary of Public Worship	1,473,758.40	....
Secretary of Colonization	2,246,063.03	104,607.89
Justice	7,807,735.07	....
Public instruction	25,325,297.54	464,684.16
Finance	12,737,101.67	28,013,305.96
War	23,311,158.10	3,554,305.63
Navy	11,431,989.31	8,085,890.54
Industry and public works—		
Secretary of industry	2,543,375.61	153,630.39
Secretary of public works	9,150,776.57	41,048.55
Secretary of railways	81,179,569.31	256,404.95
Total of budget expenditures	206,774,337.89	45,373,738.66
Expenditures authorized by:		
Special laws	46,667,697.04	2,451,362.74
On account of prior years	13,143.99	727,087.80
Total expenditures	253,455,178.92	48,552,189.20
Paper money converted in payment	19,311,925.49	12,125,515.10
Total expenditures	234,143,253.43	60,677,704.30
Equivalent to	$51,795,325.76	$22,147,362.07

DEBT.

The foreign debt on December 31, 1910, amounted to £25,258,620, equivalent to 336,781,600 pesos gold, and the internal debt to 6,093,800 pesos gold and 179,465,191.11 pesos paper. During the year the foreign debt was increased by £2,600,000 and reduced by £380,700, a net increase of £2,219,300. Of the increase, £1,500,000 is set apart for the construction of the Arica-La Paz Railroad and £1,100,000 for the rebuilding of Valparaiso. The reduction of £380,700 was on account of the amortization of outstanding obligations.

Converting the above figures into United States currency, estimating the pound sterling at $4.8665, the gold peso at 36.5 cents and gold exchange at 65, the foreign debt amounted to $122,921,074.23 and the internal debt to $39,699,875.61.

The items of the public debt are as follows:

FOREIGN DEBT.

Loans.	Interest.	Amortization.	Original issue.	In circulation Jan. 1, 1910.	Amortized in 1910.	In circulation Jan. 1, 1911.
	Per ct.	*Per ct.*				
Loan of 1885	4½	½	£808,900	£594,300	£14,600	£579,700
Loan of 1886	4½	½	6,010,000	4,623,300	96,300	4,527,000
Loan of 1887	4½	½	1,160,200	898,400	18,800	879,600
Loan of 1889	4½	½	1,546,400	1,303,440	18,640	1,284,800
Loan of 1892	5	½	1,800,000	1,542,800	21,900	1,520,900
International loan 1893	6	1	149,000	108,060	4,100	103,960
Do	4½	½	630,000	531,000	8,200	522,800
International loan 1895	4½	½	2,000,000	1,758,400	22,500	1,735,900
Coquimbo R. R. loan	4½	½	265,000	234,840	2,900	231,940
Loan of 1896	5	½	4,000,000	3,608,300	39,500	3,568,800
Peñuelas loan	5½	2	200,000	113,100	8,900	104,200
Sewage loan	5	1	1,350,000	1,321,900	15,000	1,306,900
Loan of 1906	4	2	3,700,000	3,401,480	94,360	3,307,120
Reconstruction of Valparaiso loan, 1909	5	½	3,000,000	3,000,000	15,000	2,985,000
Arica-La Paz R. R. and Valparaiso construction loan, 1910	5	1	2,600,000	....	....	2,600,000
	......	....	29,219,500	23,039,320	380,700	25,258,620

The internal gold debt is the Bolivian treaty debt of March, 1905, originally amounting to 6,500,000 pesos gold, reduced on account of amortization to 6,093,800 on December 31, 1911.

The internal paper debt represents principally paper money in circulation to the amount of 150,872,294.12 pesos.

FOREIGN COMMERCE.

The total foreign trade of Chile for the year 1910 amounted to 626,312,873 pesos gold. The imports were 297,485,697 pesos and the exports 328,827,176 pesos. In 1909 the imports were 262,082,763 pesos and the exports 306,429,909 pesos, or a total of 568,512,672 pesos. There was, therefore, an increase for the year 1910, as compared with the preceding year, of 35,402,934 pesos in imports and 22,397,267 pesos in exports, or a total gain in foreign trade of 57,800,201 pesos.

Estimating the value of the Chilean gold peso at 36.5 cents United States, the foreign trade for the year 1910 would be: Imports, $108,582,279.40; exports, $120,021,919.24, or a total of $228,604,198.64. On the same basis the figures for the year 1909 would be: Imports, $95,660,208; exports, $111,846,916.79, or a total of $207,507,125.29.

This shows an increase in trade of: Imports, $12,922,070.90; exports, $8,175,002.45, or a total increase of $21,097,073.35.

IMPORTS.

The imports for the years 1908, 1909, and 1910, by countries of origin, were as follows:

Countries.	1908	1909	1910
United Kingdom	$30,630,808	$31,879,259	$34,340,573
Germany	27,653,567	22,646,662	26,296,071
United States	8,900,570	9,636,402	13,369,774
France	4,360,059	5,661,502	7,010,929
Argentina	3,845,278	6,617,546	5,477,808
Peru	3,728,060	4,742,948	5,444,599
India	2,767,891	2,551,507	4,018,250
Italy	2,208,989	2,629,912	3,227,853
Australia	6,266,616	3,194,089	2,720,656
Belgium	4,656,438	2,760,717	2,464,941
Spain	797,992	877,469	1,249,700
Brazil	250,048	477,665	749,247
Ecuador	240,596	445,385	463,493
Uruguay	354,104	534,831	331,203
Netherlands	47.000	54,434	200,801
Other countries	843,406	959,880	1,241,381
Total	97,551,422	95,660,208	108,582,279

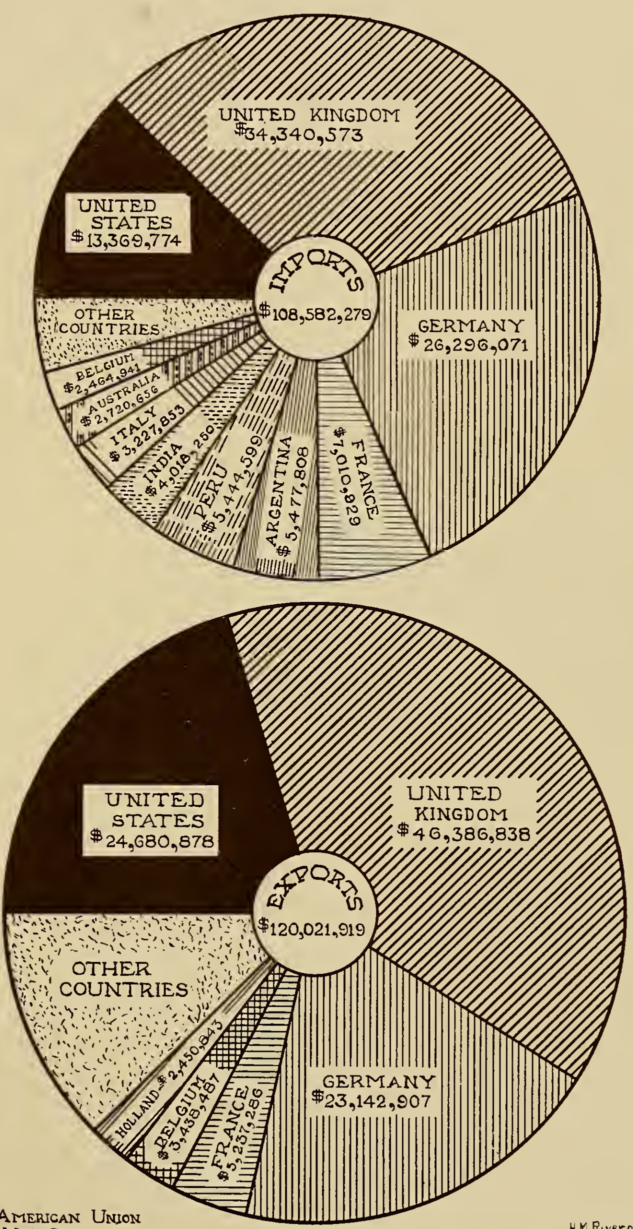
The imports by major groups of articles were as follows:

	1908	1909	1910
Textiles and manufactures thereof	$20,377,201	$23,101,983	$29,117,833
Mineral products	17,119,423	16,844,208	18,825,139
Coal and oils	17,100,257	16,570,731	18,778,313
Vegetable products	8,533,050	10,509,425	11,854,304
Machinery, hardware, carriages, etc	19,438,079	10,308,871	9,512,876
Animal products	6,786,111	10,065,369	9,142,415
Paper and manufactures thereof	2,905,926	2,535,937	3,360,852
Wines, liquors, and other beverages	1,851,059	1,931,337	2,583,964
Chemical, pharmaceutical, and toilet articles	1,983,175	2,020,430	2,335,554
Arms, ammunition, and explosives	634,539	828,929	1,598,488
Miscellaneous	822,602	842,988	1.472,541
Total	97,551,422	95,660,208	108,582.279

· CHILE ·

— COMMERCE — 1910 —

$ 228,604,198



PAN AMERICAN UNION
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TEXTILES.

The principal countries from which imports of textiles and manufactures thereof were recorded were:

Countries.	1909	1910
United Kingdom	$10,412,753	$12,155,918
Germany	5,523,663	7,449,907
India	2,305,570	3,671,269
France	2,214,089	2,637,177
Italy	1,136,135	1,510,029
United States	744,498	817,003
Belgium	271,531	358,061
Spain	243,469	255,668

Imports of textiles are classified under five general heads. For the year 1910 the amounts under these were:

Straw, palm, hemp, etc	$5,072,262
Cotton	14,441,030
Linen	448,126
Wool	7,046,033
Silk	1,213,388
Total	28,220,839

Under straw, palm, hemp, etc., the principal imports were: Twine, 886,962 kilos, of which 325,753 from the United Kingdom, 323,983 from the United States, and 189,514 from Germany.

Bagging, 665,720 kilos, of which 353,855 from the United Kingdom, 168,420 from India, and 93,920 from Germany.

Oilcloth for carpeting, 408,142 kilos, of which 220,670 from the United Kingdom and 89,446 from Germany.

Cordage, 506,005 kilos, of which 339,060 from the United Kingdom, 92,845 from Germany, 38,825 from Italy, and 32,360 from the United States

Bags, 34,861,316 kilos, of which 31,661,538 from India and 2,990,257 from the United Kingdom

Ore bags, 1,923,846 kilos, of which 1,532,007 from India and 278,421 from the United Kingdom.

Bamboo straw and palm hats, 199,568 kilos, of which 79,257 from Italy, 67,374 from France, 38,430 from the United Kingdom, and 13,542 from Germany.

Under cotton the principal imports were: Raw cotton, 130,780 kilos, of which 94,290 from Peru; cotton yarn, 855,340 kilos, of which 751,730 from the United Kingdom, 54,040 from Germany, and 23,840 from France; knitting yarn in skeins, 71,692 kilos, of which 41,562 from the United Kingdom and 19,915 from Germany.

Crocheting or embroidery thread, 964,868 kilos, of which 324,414 from Germany, 270,184 from Italy, 140,816 from the United Kingdom, and 134,424 from Belgium; spool thread, 1,231,281 kilos, of which 1,042,225 from the United Kingdom, 149,328 from Germany, and 29,363 from France; heavy drills for clothing, 1,802,445 kilos, of which 828,397 from Germany, 649,124 from the United Kingdom, and 206,981 from Italy; knit underwear, 520,927 kilos, of which 410,464 from Germany, 41,890 from the United Kingdom, 23,936 from Spain, and 27,038 from France; pillows and bedspreads, 191,156 kilos, of which 95,359 from the United Kingdom, 62,007 from Germany, and 23,385 from Italy.

Bed ticking, 195,909 kilos, of which 116,166 from the United Kingdom, 48,398 from Germany, 8,386 from the United States, 8,230 from Belgium, and 6,463 from France.

Cotton lace, 36,893 kilos, of which 16,878 from the United Kingdom, 14,942 from Germany, and 4,364 from France.

Cotton flannels, 270,118 kilos, of which 179,912 from the United States, 36,023 from Germany, and 39,220 from the United Kingdom.

Coarse unbleached cotton, 347,421 kilos, of which 347,371 from the United Kingdom.

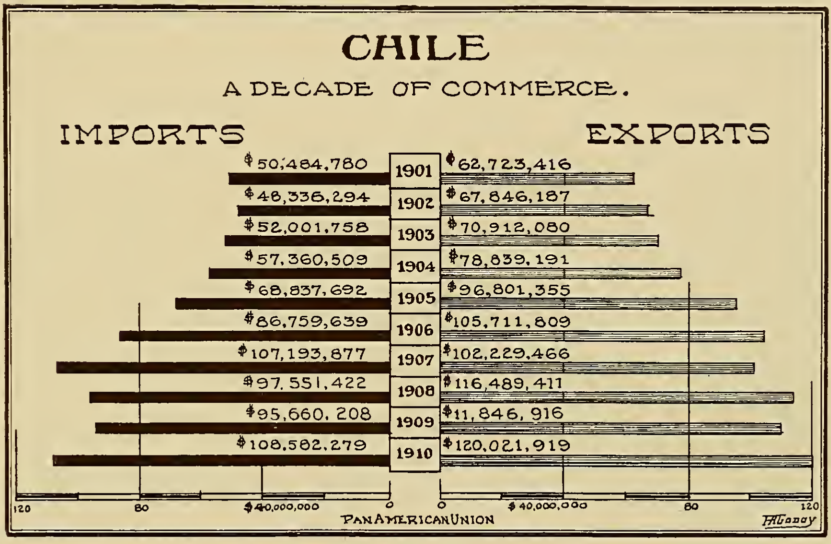
Blankets, 118,122 kilos, of which 65,942 from Germany, 27,782 from the United Kingdom, 9,460 from Belgium, and 5,790 from Spain.

Plain and twilled cloth, 2,298,505 kilos, of which 2,069,857 from the United Kingdom, 126,951 from Germany, and 67,339 from France.

Cloth for women's wear, or lining, 3,081,710 kilos, of which 2,144,010 from the United Kingdom, 620,385 from Germany, 128,210 from Italy, 118,170 from France, and 13,215 from the United States.

Cotton bagging, 1,482,671 kilos, of which from the United States were 926,398, and from the United Kingdom 342,960.

Cotton passementerie, 101,322 kilos, of which from Germany were 52,158, from France 30,209, and from the United Kingdom 6,091.



Cotton velvet, 45,324 kilos, of which from the United Kingdom were 21,446, from Germany 17,774, and from France 5,982.

Heavy ducking 1,105,935 kilos, of which from the United Kingdom were 765,780 and from the United States 226,905.

Sail cloth, 99,755 kilos, of which from the United Kingdom were 55,530 and from the United States 39,300.

Under wool, the principal items were: Yarn for knitting or embroidery, 202,974 kilos, of which from Germany were 186,120, from Italy 7,828, and from the United Kingdom 6,601.

Unwashed wool, 192,390 kilos, all from Argentina.

Carpets, 81,257 kilos, of which from the United Kingdom were 35,403, from Germany 28,609, and from France 14,216.

Baize, 235,213 kilos, of which from the United Kingdom were 217,308.

Underwear, 39,124 kilos, of which from Germany were 16,401, from the United Kingdom 16,202, and from Italy 1,985.

Cassimere, 1,372,252 kilos, of which from the United Kingdom were 882,002, from Germany 336,278, from France 96,040, and from Italy 28,684.

Felt, 94,813 kilos, of which from Germany were 55,313, from the United Kingdom 23,777, and from France 11,156.

Blankets, 47,300 kilos, of which from Germany were 23,712, from the United Kingdom 14,358, and from France 5,602.

Dress goods, all wool, 724,833 kilos, of which from Germany were 333,305, from the United Kingdom 213,991, and from France 169,935.

Men's hats, 528,032, of which from Italy were 289,302, from Germany 132,796, from France 56,629, and from the United Kingdom 44,521.

Under silk, the principal items were: Ribbons, pure silk or mixed, 9,939 kilos, of which from Germany were 4,576, from France 3,436, from Italy, 1,199, and from the United Kingdom 724.

Dress goods, 27,426 kilos, of which from France were 14,837, from the United Kingdom 5,451, from Germany 4,194, and from Italy 1,758.

Handkerchiefs, 3,848 kilos, of which from Japan were 1,157, from the United Kingdom 946, from Germany 577, from France 576, from China 293, and from Italy 284.

Passementerie, 9,115 kilos, of which from Germany were 4,583, from France 2,508, and from the United Kingdom 1,087.

Mineral products.

Countries.	1909	1910
Germany	$6,364,125	$7,507,393
United Kingdom	6,185,639	5,962,177
United States	1,495,919	2,431,407
Belgium	1,775,128	1,343,570
France	780,878	871,036
Italy	113,768	257,494
Spain	3,727	166,950
Switzerland	51,025	75,433

Imports of mineral products are classified under four general heads. For the year 1910 the amounts under these heads were:

Precious metals and jewelry	$295,525
Steel and iron	12,242,739
Other metals	1,995,750
Earths and stones	3,726,729
Total	18,260 743

Postal packages and imports through Punta Arenas not included.

Under precious metals and jewelry the principal imports were: Jewelry, $141,832, of which from France, $66,027; Germany, $52,801; United Kingdom, $14,884.

Watches, $98,493, of which from France, $4,750; United Kingdom, $18,836; and Germany, $14,590.

Under steel and iron the principal imports were: Wire, 12,271 metric tons, of which from Germany were 5,993, from the United States 4,771, from Belgium 1,082, and from the United Kingdom 351.

Hoop and strap metal, 1,799 tons, of which from Germany were 1,190, from Belgium 370, and from the United States 154.

Household utensils, 409,484 kilos, of which from the United Kingdom were 244,778, from Germany 115,663, and from the United States 37,494.

Granite ware, 1,567,409 kilos, of which from Germany were 1,318,280, from the United Kingdom 181,510, from Belgium 23,023, from the United States 26,373, and from France 16,791.

Utensils not specified, 1,070,840 kilos, of which from Germany were 418,051, from the United Kingdom 277,054, from France 195,600, and from the United States 148,301.

Wire staples, 757,740 kilos, of which from Germany were 526,920, from the United States 130,040, and from Belgium 77,150.

Wire rope, 795,685 kilos, of which from the United Kingdom were 495,055, from Germany 130,060, from the Argentine Republic 128,330, and from the United States 40,415.

Piping and accessories 19,065 tons, of which from the United Kingdom were 8,429, from Germany 7,207, from Belgium 2,075, and from the United States 1,202.

Nails, cut, 2,655 tons, of which from the United States were 2,319, from Germany 207, and from the United Kingdom 112.

Nails, wire, 1,266 tons, of which from Germany were 720,293, from the United States 410,886, from the United Kingdom 74, and from Belgium 53.

Railroad spikes, 1,323 tons, of which from the United Kingdom were 396, from the United States 390, from Belgium 338, and from Germany 193.

Fishplates, 3,068 tons, of which from the United Kingdom were 1,053, from Germany 791, from Belgium 677, and from the United States 421.

Corrugated iron, 4,395 tons, of which from the United Kingdom were 3,466, from the United States 816, and from Germany 112.

Corrugated iron, galvanized, 18,888 tons, of which from the United Kingdom were 14,418, and from the United States 4,251.

Sheet iron, painted, tinned, or galvanized, 2,873 tons, of which from the United Kingdom were 2,308, and from the United States 437.

Sheet iron, plain, 4,564 tons, of which from the United Kingdom were 2,027 and from Germany 1,542.

Bars or sheets, unwrought, 23,053 tons, of which from Germany were 10,152, from Belgium 5,228, from the United Kingdom 4,511, and from the United States 2,643.

Tinplate, 2,025 tons, of which from the United Kingdom were 1,960.

Steel rails, 45,154 tons, of which from the United Kingdom were 12,006, from the United States 11,433, from Belgium 10,361, and from Germany 7,271.

Car wheels, 1,693 tons, of which from the United Kingdom were 1,172, from Germany 398, and from Belgium 72.

Bolts and nuts, ordinary, 433 tons, of which from the United States were 139, from the United Kingdom 135, and from Germany 112.

Bolts and nuts, railway, 1,905 tons, of which from Germany were 835, from Belgium 494, and from the United Kingdom 473.

Structural steel, 1,873 tons, of which from Germany were 797, from the United Kingdom 526, from the United States 396, and from France 150.

Under other metals the principal imports were: Copper, brass, and lead wire, 591,693 kilos, of which from Germany were 482,194, from the United States 42,713, from the United Kingdom 37,511, and from France 14,255.

Brass and copper manufactures, 150,016 kilos, of which from the United Kingdom were 64,060, from Germany 53,319, from France 17,173, and from the United States 12,055.

White-metal manufactures, 34,909 kilos, of which from the United Kingdom were 18,947, from Germany 8,252, from France 3,824, and from the United States 3,734.

Tubing and accessories, 589,187 kilos, of which from the United Kingdom were 476,204, from Germany 73,126, and from Belgium 17,497.

Zinc, sheets or bars, 376,560 kilos, of which from Germany were 257,760, from Belgium 71,400, and from the United Kingdom 39,980.

Lamps, 132,647 kilos, of which from Germany were 72,102, from the United Kingdom 29,323, and from the United States 16,916.

Under earths and stones the principal importations were: Bottles, 7,194 tons, of which from Germany were 7,025.

Electric bulbs, 163,416 kilos, of which from Germany were 115,958, from the United Kingdom 35,481, and from the United States 7,325.

Calcium carbide, 2,116 tons, of which from Germany were 1,597.

Cement, 72,638 tons, of which from Germany were 42,532, from the United Kingdom 14,361, United States 9,508, and from Belgium 5,834.

Common glassware, 3,822 tons, of which from Germany were 2,757, from the United States 341, from Belgium 323, from France 210, and from the United Kingdom 181.

Stoneware, 2,708 tons, of which from the United Kingdom were 1,590, from Germany 827, and from France 162.

Porcelain, 416 tons, of which from Germany were 316, from France 48, and from the United Kingdom 44.

Window glass, 4,174 tons, of which from Germany were 3,141, and from Belgium 826.

Coal, oils, etc.

Countries.	1909	1910
United Kingdom	$7,401,706	$8,691,669
United States	3,334,667	4,125,755
Australia	3,191,815	2,609,633
Peru	1,681,476	1,851,285
Germany	864,816	672,557
Netherlands	404	283,012

Imports of coal, oils, etc., were classified under four general heads. For the year 1910 the amounts, not including postal packages and imports into Punta Arenas, were:

Industrial oils	$728,519
Varnishes and blacking	143,893
Fuels and combustibles	17,070,898
Paints, dyes, and inks	618,273
Total	18,561,583

The principal industrial oils were: Linseed, 1,009 metric tons, of which 614 from the United Kingdom and 333 from Germany; turpentine, 542 tons, of which 474 from the United States; and mineral oil, 8,008 tons, of which 6,296 from the United States, 1,170 from Germany, and 523 from the United Kingdom.

The principal articles under varnishes and blacking were: Copal varnish, 87,580 kilos, of which 46,331 from the United Kingdom, 21,178 from the United States, and 18,107 from Germany.

Shoe blacking, 263,965 kilos, of which 113,735 from Germany, 87,805 from the United Kingdom, 32,250 from the United States, and 27,099 from France.

Under fuels and combustibles the principal items were: Coal, 1,428,120 tons, of which 1,023,970 were from the United Kingdom and 357,419 from Australia.

Coke, 64,953 tons, of which from the Netherlands 36,020; 15,553 from the United Kingdom, and 11,203 from Germany.

Charcoal, 3,448 tons, of which from Peru 3,443.

Paraffin, 4,185 tons, of which 2,191 from Germany, and 1,983 from the United Kingdom.

Refined mineral oils, paraffin, petroleum, gasoline, naphtha, etc., 28,171 tons, of which 27,509 from the United States.

Crude petroleum, 116,708 tons, of which 67,368 from the United States and 49,335 from Peru.

Candles, 358,795 kilos, of which 198,355 from the United Kingdom, 104,100 from Germany, and 42,365 from Belgium.

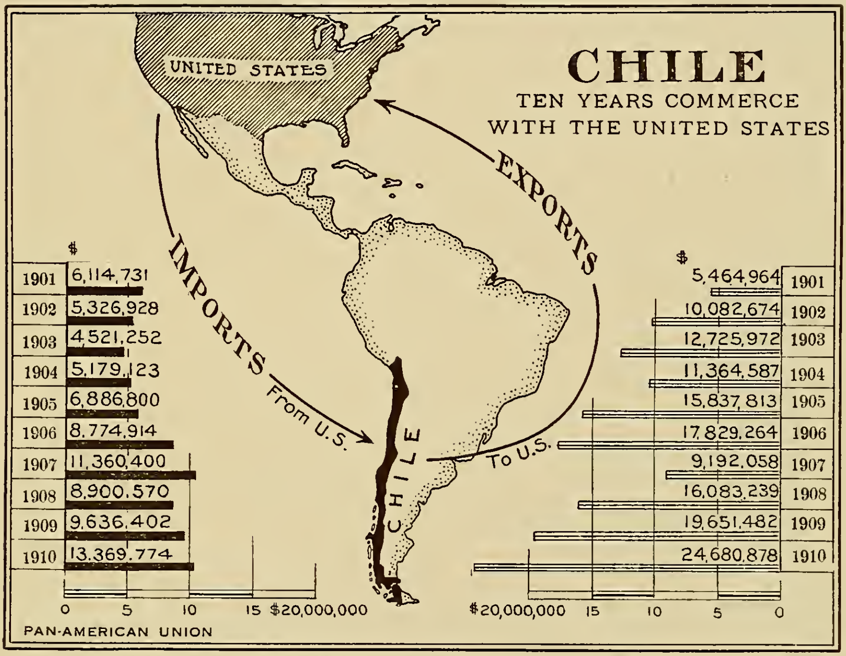
Under paints, dyes, and inks, the principal items were: Aniline, alizarin and imitations, 50,327 kilos, of which 39,395 from Germany.

Prussian blue, 332,439 kilos, of which 277,687 from Germany and 37,704 from the United Kingdom.

Paints, ordinary, 2,985,190 kilos, of which 2,111,750 from the United Kingdom and 692,440 from Germany.

Vegetable products.

Countries.	1909	1910
Peru	$2,721,471	$3,225,954
Germany	1,704,323	1,911,614
United Kingdom	1,493,939	1,676,703
United States	1,299,001	1,318,763
Italy	836,028	693,490
Ecuador	436,067	454,321
France	402,963	449,856



Imports of vegetable products are classified under six general heads. For the year 1910 the importation under these heads was as follows:

Fruits, grains, and vegetables	$4,363,575
Food products	4,164,113
Industrial products	720,137
Manufactures	432,645
Woods, lumber, and manufactures	1,211,431
Tobacco	279,696
Total	11,171,597

Postal packages and imports through Punta Arenas are not included.

Under fruits, grains, and vegetables the principal articles of import were: Red pepper, 499,453 kilos, of which 115,885 kilos came from Germany, 222,936 from Spain, 78,160 from Peru, and 65,682 kilos from Italy.

Rice, 20,339 metric tons, of which 7,186 were from Germany; 6,541 from India, 2,764 from Italy, from Peru 2,296, and 1,253 from United Kingdom.

Coffee, 4,205 tons, of which 1,860 from Ecuador, 1,095 from Brazil, 439 from Peru, 379 from Guatemala, and 194 from United Kingdom.

Cumin, 172,244 kilos, of which 105,390 from Germany and 54,404 from Italy.

Pepper, 199,677 kilos, of which 135,393 from Germany, 26,375 from United Kingdom, and 15,632 from Italy.

Tea, 1,519,904 kilos, of which 1,398,924 from United Kingdom and 67,478 from Germany.

Yerba maté, 4,211,730 kilos, of which 2,895,380 from Brazil and 998,480 from Uruguay.

Under food products the principal imports were: Olive and other food oils, 2,868,077 kilos, of which 1,059,127 were from Italy, 920,999 from United States, 288,129 from Germany, and 272,162 from Spain.

Sugar, 71,150 tons, of which 65,596 tons came from Peru and 4,521 tons from Germany.

Canned vegetables, 224,355 kilos, of which 49,925 from United Kindgom, 21,085 from Italy, 47,145 from Germany, 45,200 from France, 40,815 from Spain, and 10,095 from China, and 3,760 from the United States.

Chocolate, 161,925 kilos, of which 71,945 from United Kingdom, 32,865 from France, 25,690 from Germany, and 23,340 kilos from Italy.

Flour and meal, other than wheat, 300,444 kilos, of which 102,690 from United Kingdom, 75,685 from Germany, 42,385 from France, and 27,800 from United States.

Under industrial products the principal imports were: Starch, 425 tons, of which 376 from Germany.

Copra, 1,132 tons, of which from Germany 676, and from the United States 451.

Cork and corks, 261,246 kilos, of which 105,952 from Germany, 81,687 from Spain, and 49,108 from France.

Hops, 226,420 kilos, of which 224,270 from Germany.

Pine tar, 2,226 tons; 1,017 from Germany, 824 from United States, and 405 from United Kingdom.

Pine rosin, 753 tons, of which 542 from United States and 148 from Germany.

Under manufactures the principal articles imported were:

Articles of guatta-percha or rubber, 46,037 kilos, of which 16,690 from Germany, 15,478 from United Kingdom, 9,984 from France, and 2,260 from United States.

Combs, 37,690 kilos, of which 22,772 from Germany, 8,447 from France, and 4,703 from United Kingdom.

Under woods, lumber, and manufactures the principal articles were: Staves, 1,036 tons, all from the United States.

Pine lumber, not planed, 268,910 tons, of which 242,340 from the United States.

Furniture, not specified, 472,595 kilos, of which 170,270 from United Kingdom, 138,894 from United States, 153,176 from Germany, and 87,178 from France.

Chairs and sofas, 345,631 kilos, of which 226,453 from Germany, 83,379 from United States, and 19,035 from United Kingdom.

Under tobacco the following were the principal articles: Cigarettes, 50,742 kilos, of which 19,030 from France, 15,470 from United Kingdom, and 9,482 from Cuba.

Cigars, 30,745 kilos, of which 15,733 from Cuba, 4,254 from Germany, 2,706 from Italy, and 2,641 from Panama.

Leaf tobacco, 38,919 kilos, of which 18,567 from Cuba, 8,829 from Germany, and 8,311 from Panama.

Machinery, hardware, carriages, etc.

Countries.	1909	1910
Germany	$4,222,729	$3,266,020
United Kingdom	3,987,813	2,739.225
United States	1,429,477	2,724,965
France	196,098	310,967
Belgium	350,897	292,573
Italy	66,191	95,030

Imports of machinery, hardware, carriages, etc., were classified under five general heads. For the year 1910 the amounts under these heads were:

Arts and sciences	$957,154
Mining	926,321
Agricultural	2,031,238
Other industrial	4,500,635
Locomotives and vehicles	940,066
Total	9,355,414

Postal packages and imports through Punta Arenas not included.

Under arts and sciences the principal imports were: Scales and steelyards, 403,000 kilos, of which 304,685 from the United States, 61,039 from United Kingdom, and 30,019 from Germany.

Scientific instruments, 96,970 kilos, of which 43,106 from Germany, 30,513 from United Kingdom, 14,219 from United States, and 8,184 from France.

Typewriters and adding machines, 1,820 machines, of which 1,317 from United States, 269 from Germany, and 185 from United Kingdom.

Lithographing and printing presses and tools, 297,620 kilos, of which 93,685 from Germany, 72,370 from France, 42,545 from Italy, 35,286 from United States, and 33,148 from United Kingdom.

Pianos, pianolas, etc., 365,718 kilos, of which 295,653 from Germany, 45,468 from United States, 15,933 from France, and 6,775 from United Kingdom.

Under mining the principal imports were: Air pumps and steam rams, 210,320 kilos, of which 84,000 from United Kingdom, 48,900 from United States, and 62,740 from Germany.

Machines and apparatus, not specified, 3,549 tons, of which 1,571 from United States, 1,135 from United Kingdom, 743 from Germany, and 49 from Belgium.

Under agricultural the principal imports were: Plows and parts of plows, 1,593 tons, of which 1,124 from United States, 422 from Germany, and 26 from United Kingdom.

Machines and apparatus, not specified, 4,181 tons, of which 2,336 from United States, 1,011 from United Kingdom, 596 from Germany, and 228 from France.

Shovels, 418 tons, of which 309 from United Kingdom, 68 from Germany, and 37 from United States.

Drills, 213 tons, of which 165 from the United States.

Under other industrial the principal imports were: Belting for machines, 205 tons, of which 101 from United Kingdom, 69 from Germany, and 31 from United States.

Cranes and lifting jacks, 401 tons, of which 341 from United Kingdom, 45 from Germany, and 13 from the United States.

Artisans' tools, 190,464 kilos, of which 72,625 from Germany, 59,350 from United Kingdom, 48,850 from United States, and 7,280 from France.

Small hardware, 271,870 kilos, of which 90,240 from United Kingdom, 80,035 from Germany, 77,360 from United States, and 17,910 from France.

Sewing machines, and parts of, 1,179 tons, of which 499 from United States, 425 from Germany, and 248 from United Kingdom.

Machines, apparatus, etc., for electric lighting and other purposes, 2,630 tons, of which 1,716 from Germany, 520 from United Kingdom, 309 from United States, and from Argentina 49.

Machines and utensils for gas companies, 136 tons, of which 135 from United Kingdom.

Industrial machinery, not specified, 4,024 tons, of which 1,603 from Germany, 969 from United Kingdom, 969 from United States, 219 from France, and 172 from Italy.

Machinery for breweries, 291 tons, of which 190 from Germany and 99 from the United States.

Motors, 2,287 tons, of which 1,849 from United Kingdom, 321 from Germany, and 71 from United States.

Parts of machines, 3,932 tons, of which 1,771 from Germany, 1,040 from United Kingdom, 728 from United States, and 294 from Belgium.

Under locomotives and vehicles the principal imports were: Bicycles, tricycles, etc., 21,987 kilos, of which from Germany were 11,203, from the United Kingdom 3,406, from Italy 3,108, from France 2,974, and from the United States 1,271.

Boats, sloops, and launches, 35, of which from the United States were 16, from the United Kingdom 8, and from Germany 7.

Railway freight cars, 713 tons, of which from Belgium were 341, from the United Kingdom 246, and from the United States 68.

Aerial and dummy railways, 1,210 tons, of which from Germany were 773, from the United Kingdom 276, and from Belgium 158.

Railway passenger coaches, 121 tons, of which from the United Kingdom were 58 and from Germany 56.

Locomotives and tenders, 1,801 tons, of which from the United States were 683, from Germany 413, and from the United Kingdom 347.

Animal products.

Countries.	1909	1910
Argentina	$6,386,801	$5,242,139
France	776,459	943,142
United Kingdom	678,633	753,683
Germany	738,969	689,618
United States	431,262	568,770
Peru	236,167	267,042
Uruguay	255,461	95,411

The imports of animal products are classified under four general heads. The importations for the year 1910 under these heads were as follows:

Live animals	5,503,842
Food products	1,060,805
Industrial products	1,454,905
Manufactures	672,190
Total	8,691,742

Under live animals the principal imports were: Horses, 3,877, of which 3,824 were from Argentina.

Goats, 14,958, of which from Argentina were 14,293 and from Peru 665.

Sheep, 25,536, of which from Argentina were 23,297 and from Peru 2,207.

Cattle, 81,339, of which from Argentina were 77,267 and from Peru 3,502.

Under food products the principal imports were: Condensed milk, 684,820 kilos, of which from Belgium were 278,200, from the United Kingdom 272,360, and from Germany 94,940.

Edible fats, other than butter and lard, 734 tons, of which from Uruguay were 408, from the United Kingdom 191, and from Argentina 134.

Lard, 789 tons, of which from the United States were 725, from Uruguay 21, from Peru 19, and from China 17.

Dried fish, 286 tons, of which from Germany were 192 and from the United Kingdom 63.

Cheese, 230 tons, of which from Italy were 110 and from Germany 64.

Salmon, 1,000 tons, of which from the United States were 889.

Sardines, 1,075 tons, of which from Spain were 528, from the United Kingdom 233, and from Germany 196.

Under industrial products the principal imports were: Calfskins, 53,756 kilos, of which from France were 29,212, from Germany 10,279, and from the United States 8,619.

Morocco leather, 49,438 kilos, of which from France were 36,580, from Germany 6,311, from the United Kingdom 3,113, and from the United States 2,988.

Goatskins and imitations, 124,181 kilos, of which from France were 77,326, from the United States 28,633, and from the United Kingdom 10,411.

Stearin, 1,217 tons, of which from Germany were 859, from Belgium 257, and from the United Kingdom 77.

Common soap, 967 tons, of which from the United Kingdom were 834 and from the United States 70.

Tallow, 120 tons, of which from Uruguay were 116.

Under manufactures the principal imports were: Babies' and children's shoes, 171,289 pairs, of which from France were 59,913, from the United Kingdom 53,884, from Germany 45,843, and from the United States 1,284.

Men's and women's shoes, 30,251 pairs, of which from the United States were 11,577, from the United Kingdom 8,595, from Germany 6,669, and from France 2,087.

Paper and manufactures.

Countries.	1909	1910
Germany	$1,352,571	$1,745,651
United States	485,080	769,072
United Kingdom	311,779	407,458
France	116,616	118,626
Italy	81,183	118,056

The principal imports under paper and manufactures for the year 1910 were: Books, 531 tons, of which from Germany were 194, from the United States 103, and from the United Kingdom 59.

Poster and handbill paper, 619 tons, of which from Germany were 538 and from Great Britain 24.

Print paper, 11,168 tons, of which from Germany were 5,409, from the United States 4,065, and from the United Kingdom 1,109.

Writing paper, ordinary, 478 tons, of which from Germany were 213 and from the United Kingdom 129.

Writing paper, fine, 39 tons, of which from Spain were 26 and from Germany 6.

Cigarette paper, 240 tons, of which from Germany were 164 and from Spain 38.

Wall paper, 769 tons, of which from Germany were 271, from the United Kingdom 121, from Belgium 35, from France 32, and from the United States 10.

Wines, liquors, and other beverages.

Countries.	1909	1910
France	$613,729	$772.756
United Kingdom	466,306	596,567
Italy	235.668	349,138
Germany	234.965	348,751
Spain	210,500	268,502
Austria-Hungary	67,753	101,786
Portugal	60,519	90,574

The imports of wines, liquors, and other beverages are classified under two general headings. The imports for 1910 under these headings were as follows:

Mineral waters and fruit sirups	$329,797
Wines and liquors	1,433,836
	1,763.633

Postal packages and imports through the port of Punta Arenas not included.

Under mineral waters and fruit sirups the principal imports were: Natural and artificial mineral waters, 2,815 tons, of which 1,040 from Germany, 763 from United Kingdom, 425 from France, 309 from Spain, and 225 from Italy.

Under wines and liquors the principal imports were: Beer, 163,678 bottles, of which 104,416 from Germany and 46,056 from United Kingdom.

Champagne, 296,572 bottles, of which 248,186 from France and 32,870 from United Kingdom.

Cognac, 210,810 bottles, of which 161,886 from France and 30,429 from United Kingdom.

Liqueurs, 203,562 bottles, of which 84,747 from France, 48,750 from United Kingdom, 39,357 from Spain, and from Germany 16,353.

Vermouth, 233,918 bottles, of which 131,830 from Italy and 79,150 from France.

Red wine, 234,874 bottles, of which 93,542 from France, 49,322 from Germany, 35,298 from Italy, 28,668 from Spain, and 20,694 from United Kingdom.

Whisky, 356,745 bottles, of which 331,362 from United Kingdom, 6,783 from Germany, and 15,039 from United States.

Chemical and pharmaceutical products and toilet articles.

	1909	1910
Germany	$817,347	$847,966
United Kingdom	479,512	613,639
France	353,296	393,625
United States	232,282	298,627
Italy	49,641	85,322

Imports of chemical and pharmaceutical products and toilet articles are classified under three general headings. The imports for the year 1910 under these headings were as follows:

Perfumery	$275,748
Pharmaceutical articles	1,094,220
Chemical products	728,239
Total	2,098,207

Under perfumery the principal imports were: Toilet waters and scents, 75,949 kilos, of which from France were 28,395, from the United Kingdom 17,170, from Germany 14,864, and from the United States 13,970.

Toilet extracts, 13,291 kilos, of which from France were 8,056, from the United Kingdom 2,486, and from Germany 2,299.

Fancy soaps, 32,042 kilos, of which from the United Kingdom were 13,019, from France 9,132, and from Germany 7,763.

Face powders, 44,995 kilos, of which from France were 29,568, from Germany 6,604, from the United Kingdom 5,026, and from Italy 3,304.

Under pharmaceutical products the principal imports were: Pills and capsules, 39,178 kilos, of which from Germany were 14,909, from France 9,727, from the United States 9,055, from the United Kingdom 3,912, and from Italy 1,313.

Roots and herbs, 289,907 kilos, of which from Peru were 128,352, from Germany 90,983, from Bolivia 35,130, from Argentina 10,150, and from Italy 9,332.

Drugs, 110,424 kilos, of which from Germany 56,392, from the United Kingdom 20,639, from the United States 20,208, and from France 12,041.

Extracts and essences, 41,834 kilos, of which from Germany were 26,603, from the United Kingdom 6,406, from the United States 4,231, and from France 3,197.

Proprietary medicines, 145,926 kilos, of which from the United States were 50,519, from Germany 38,636, from the United Kingdom 26,369, and from France 25,740.

Under chemical products the principal imports were: Citric and tartaric acids, 55,154 kilos, of which from Germany were 44,095, from the United Kingdom 4,782, and from Italy 3,045.

Caustic soda, purified, 19,272 kilos, of which from the United Kingdom were 13,688 and from Germany 2,474.

Soda and soda salts, 369,537 kilos, of which from Germany were 299,869, from the United Kingdom 38,109, and from Belgium 15,545.

Common soda, impure, 1,152,740 kilos, of which from the United Kingdom were 1,007,680, from the United States 70,300, from Germany 43,680, and from France 31,080.

Arms, ammunition, and explosives.

	1909	1910
Germany	$353,253	$762,941
United Kingdom	292,488	504,793
United States	96,105	215,470
France	10,686	27,021
China	7,800	21,152

Imports of arms, ammunition, and explosives are classified under three headings. The imports for the year 1910 under these headings were as follows:

Arms	$320,028
Ammunition	85,897
Explosives	1,182,575
Total	1,588,500

Postal packages and imports through the port of Punta Arenas not included.

Under arms the principal imports were: Importation for use of the army and navy, $214,269, of which $180,044 from the United Kingdom, from Germany $26,408, and from Italy $6,634.

Under ammunition the principal imports were: Cartridges, 157,483 kilos, of which 72,839 from United States and 47,822 from Germany.

Under explosives the principal imports were: Dynamite, 1,298,950 kilos, of which 506,250 from Germany, 510,395 from United Kingdom, and from the United States 288,320.

Miscellaneous.

	1909	1910
Germany	$469,900	$691,788
France	161,850	406,114
United Kingdom	168,680	237,735
United States	79,508	59,818
Italy	11,760	25,037

Postal packages and imports through the port of Punta Arenas not included.

The principal imports for the year 1910 were: Church properties, 37,878 kilos, of which 19,916 from Germany and from France 9,134.

Commercial fertilizer, 1,405,915 kilos, of which from Germany 1,043,435.

Toys of all kinds, 302,170 kilos, of which 239,036 from Germany, 22,535 from France, 25,697 from United Kingdom, and 8,617 from United States.

EXPORTS.

The exports for the years 1908, 1909, and 1910, by countries, were as follows:

Countries.	1908	1909	1910
United Kingdom	$54,514,837	$46,928,427	$46,386,858
United States	16,083,239	19,651,482	24,680,878
Germany	24,672,202	23,931,914	23,142,907
France	6,976,964	5,216,911	5,237,286
Belgium	3,160,018	2,898,600	3,438,487
Netherlands	2,606,307	3,355,972	2,450,843
Spain	700,981	528,183	1,990,262
Cape Colony	....	757,926	1,448,167
Bolivia	206,752	661,087	1,286,014
Argentina	1,027,450	793,188	1,048,167
Peru	1,252,634	1,030,819	969,881
Japan	293,582	394,519	730,241
Polynesia	254,083	398,500	538,718
Portugal	1,254,920	73	510,255
Italy	562,198	1,000,142	443,408
Canada	77,721	305,052	343,823
Egypt	....	57,758	258,566
Uruguay	143,295	187,380	225,909
Brazil	186,993	120,115	213,709
Sweden	19,443	90,330	86,534
Mexico	....	18,929	85,885
Panama	15,823	53,121	46,521
Foreign merchandise exported	1,779,367	3,109,188	4,239,008
Other countries	700,602	357,300	218,985
Total	116,489,411	111,846,916	120,021,919

The exports by major groups of articles were as follows:

	1908	1909	1910
Animal products	$6,091,550	$8,437,712	$8,823,644
Vegetable products	8,936,729	11,023,155	8,074,523
Mineral products	99,082,573	89,100,568	98,234,335
Specie	53,765	1,095	....
Beverages	71,763	56,659	64,581
Foreign merchandise exported	1,779,367	3,109,188	4,239,008
Miscellaneous	473,664	118,539	585,828
Total	116,489,411	111,846,916	120,021,919

EXPORTS BY ARTICLES AND COUNTRIES.

The principal countries of exports under this heading were:

Animal products.

	1909	1910
United Kingdom	$5,331,180	$5,163,334
Germany	1,672,005	1,783,225
France	945,733	1,171,868
United States	194,253	287,755
Belgium	109,499	141,317
Peru	108,272	106,866
Argentina	8,408	72,925
Bolivia	33,964	67,447

In the above table and those following foreign merchandise exported is not included.

Exports of animal products are classified under four general headings.

For the year 1910 the amounts under the general heads were: Live animals, $153,793; food products, $183,901; industrial products, $3,122,377; manufactures, $14,582.

Under live animals the principal exports were: Horses, 1,485, of which 837 were to Argentina, to Bolivia 303, and to Peru 272.

Mules, 1,276, of which to Peru were 447, to Argentina 435, to Bolivia 319, and to Panama 75.

Under food products the principal exports were: Jerked beef, 107,900 kilos, of which to Peru were 94,500, and to Bolivia 12,900.

Honey, 1,482 tons, of which to Germany were 1,347, to the United Kingdom 95, and to France 20.

Under industrial products the principal exports were: Wax 213 tons, of which to Germany were 181, and to the United Kingdom 26.

Goatskins, 106 tons, of which to France were 91, and to the United Kingdom 8.

Chinchilla skins, 52 tons, of which to the United States were 28, and 21 to France.

Sheepskins, 12 tons, of which to Germany were 7, and France 4.

Ox and cow hides, 4,326 tons, of which to France were 2,894, to Germany 706, and to the United Kingdom 470.

Common wool, not merino, 1,359 tons, of which to France were 576, to the United Kingdom 338, and 225 to Germany.

Merino wool, 903 tons, of which to the United Kingdom were 793, to France 65, and to the United States 44.

Mixed wool, 168 tons, of which to the United Kingdom were 113.

Sole leather, 1,530 tons, of which to Germany were 1,509, and to France 11.

Vegetable products.

	1909	1910
United Kingdom	$7,248,424	$3,950,165
Bolivia	609,634	859,350
Argentina	726,924	849,401
Peru	764,298	824,568
Germany	1,084,580	807,318
Uruguay	175,604	209,578
Brazil	119,780	203,197
United States	13,712	124,628
Belgium	103,408	59,259
France	87,950	59,160

The exports of vegetable products are classified under five general headings. For the year 1910 the amounts under the general headings were:

Fruits, herbs, grains, and vegetables	$6,915,666
Food products	763,528
Industrial products	212,377
Woods	57,555
Tobacco	5,228
Total	7,954,354

Under fruits, herbs, grains, and vegetables the principal exports were: Bran and shorts, 24,921 tons, of which to Germany were 12,905, to the United Kingdom 1,907, and to Belgium 101.

Carob beans, 2,621 tons, of which to Argentina were 1,524, to Germany 513, to Brazil 198, to the United Kingdom 148, and to Uruguay 108.

Oats, 33,605 tons, of which to the United Kingdom were 31,506, and to Germany 1,085.

Barley, 26,943 tons, of which to the United Kingdom were 22,073, to Bolivia 2,788, and to the United States 1,300.

Kidney beans, 4,984 tons, of which to Argentina were 2,135, to Brazil 191, to the United States 817, to Uruguay 785, and to Peru 164.

Chick peas (garbanzos), 676 tons, of which to Argentina were 274, to Brazil 118, and to Uruguay 102.

Lentils, 363 tons, of which to Brazil were 127, and to Peru 50.

Nuts, 3,082 tons, of which to Argentina were 2,066, to Brazil 545, and to Uruguay 362.

Hay, 5,906 tons, of which to Bolivia were 3,261, to Panama 1,961, and to the United Kingdom 510.

Wheat, 61,139 tons, of which to the United Kingdom were 41,982, to Peru 14,830, to Germany 2,810, and to the Netherlands 1,016.

Under food products the principal exports were: Canned fruits, 36,650 kilos, of which to Peru were 15,500, to Bolivia, 6,770, to Argentina 6,370, and to Germany 3,500.

Refined sugar, 173,700 kilos, of which to Bolivia were 94,800, and to Argentina 76,300.

Wheat flour, 9,865 tons, of which to Bolivia were 9,220, to Argentina 323, and to Peru 291.

Under industrial products, the principal exports were: Lingue bark (cascara de lingue) 1,182 tons, all to Peru.

Quillay bark, 2,408 tons, of which to Germany were 1,048, to France 597, to the United Kingdom 325, and to the United States 183.

Under woods the principal articles were: Oak staves, 49,700 kilos, all to Peru.

Railway sleepers, 1,180,100 kilos, of which 1,176,200 were to Bolivia.

Building lumber, 33,857 kilos, of which to Argentina were 13,619, to Peru 9,736, to Uruguay, 4,920, and to Bolivia 4,117.

Under tobacco the only two items were: Cigarettes, 1,270 kilos, of which to Peru 978, and 282 to Bolivia, and tobacco, 8,380 kilos, of which to Argentina, 8,180.

Mineral products.

	1909	1910
United Kingdom	$34,341,807	$37,266,567
United States	19,441,744	24,264,299
Germany	21,146,503	20,479,097
France	4,133,936	3,947,551
Belgium	2,685,474	3,236,880
Netherlands	3,324,032	2,381,287
Spain	525,400	1,987,458
British South Africa	757,926	1,448,167

Under mineral products the principal exports for the year 1910 were: Borate of lime, 33,476 tons, of which to the United Kingdom, 13,430, to Argentina, 12,830, to France 5,027, and to Belgium, 1,118.

Copper, 26,061,845 kilos, of which to the United Kingdom were 15,591,592, to the United States 7,950,950, and to Germany 1,315,423.

Copper ore, 78,518 tons, of which to the United Kingdom were 48,206, and to the United States, 30,137.

Copper and gold ore, 2,872 tons, all to the United Kingdom.

Silver ore, 338 tons, of which to Germany were 278.

Silver and gold ore, 1,145 tons, of which to the United Kingdom were 1,144.

Silver bars, 317,212 grams, of which to the United Kingdom were 312,552.

Nitrate of soda, 2,356,667 metric tons (value $86,018,364), shipped to the following countries:

	Tons.		Tons.
United Kingdom	849,149	Italy	11,136
United States	586,692	Canada	9,419
Germany	496,165	Egypt	7,084
France	92,350	Sweden	2,370
Belgium	87,116	Mexico	2,353
Netherlands	63,961	Australia	966
Spain	54,450	Peru	713
British South Africa	39,675	China	308
Japan	20,005	Argentina	261
Polynesia	14,759		

The exports of iodine in 1910 amounted to 581,432 kilos, of which 309,480 to Germany, 208,268 to United States, and 55,692 to United Kingdom.

Beverages.

	1909	1910
Argentina	$40,270	$38,645
Bolivia	7,619	19,297
Uruguay	1,230	2,629
Peru	583	1,456

Miscellaneous.

	1909	1910
Bolivia	$9,348	$338,572
Argentina	7,514	77,503
Germany	28,160	72,650
France	48,097	58,109
Uruguay	9,370	11,710

The principal exports under miscellaneous for the year 1910 were: Cream of tartar, 117,485 kilos, of which 70,637 to Germany, and 46,848 to France.

Tanning extracts, 232,610 kilos, of which 200,550 to Germany, 16,180 to Bolivia, and 10,380 to United States.

Medicinal plants, 281,955 kilos, of which 215,696 to Germany, 43,961 to United States, and to France 13,960.

PRODUCTS AND INDUSTRIES.

Chile has three great productive zones, in some ways quite distinct from each other. In the extreme south, adjacent to the Strait of Magellan, is a newly developing region well suited for sheep and similar pastoral industry, but showing also mineral possibilities; its natural product, however, is an abundance of woods such as pine, where may be found one of the few tracts in South America from which building material of this character can be taken. The central portion of Chile possesses the famous Central Valley, one of the garden spots of nature. Here all the products of the temperate zone and most of those of a subtropical climate, grow luxuriantly, and it is by far the most thickly settled and highly cultivated section of the Republic. In the north lies the third zone, which appears to be barren, sterile, and worthless, but which in reality, by reason of the nitrate found there, has been the source of much of the wealth of the country.

The NITRATE FIELDS exported in 1830, the first year of the industry, only about 85,000 quintals (quintal=220.46 pounds) of crude material; in 1910 the export amounted to 50,781,000 quintals, and with all careful estimates there is a visible supply of the nitrate mineral, allowing for increased consumption, for at least the next 50 years. Chile is entitled to consider the revenue derived from this export as a dependable source of income, and as nitrate compounds form one of the essentials of modern industry, it is worth remembering where it comes from.

The nitrate or saltpeter zone embraces an area in the north of Chile of about 450 miles from one end to the other. The deposits of the mineral do not lie close to the coast, but are separated from the sea by an interval varying from 15 to 93 miles, and they are always at an altitude of from 3,600 to 13,000 feet, in a barren and waterless plain. The climate in this region is delightful, but vegetation is absent, although nitrate forms one of the chief food ingredients of all plant life. Many well-known

Chilean ports are on this strip of coast—Pisagua, Junin, Iquique, Antofagasta, Taltal, Caldera—from which the shipment of nitrate is almost the sole activity.

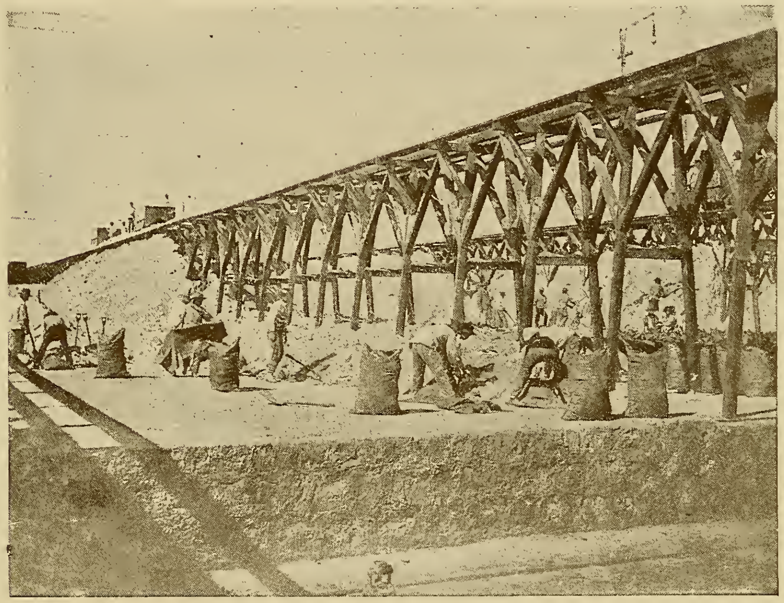
Saltpeter, or nitrate of soda, is found mixed with other substances, but if the proportion is 30 per cent or above, and according to the claims of some advanced chemists even as low as 7 per cent, a commercial profit is obtainable from the crude deposits. The beds contain four layers of material, the next lowest being that of the nitrate itself. Above this are the chuca on the surface, which is nothing more than the accumulation of ages; the costra beneath, a harder and older mass, but still a somewhat worthless débris; the caliche, the real nitrate of soda; and, finally, the stratum of bed rock called gova. To obtain the nitrate a shaft is sunk to the gova, upon which powder is placed and exploded; the overlying mass is thrown up and the caliche containing the nitrate scattered on the ground. This is then collected and taken to the refining works, called "oficinas," for preparation into refined and almost pure nitrate of soda, ready for export.

EXPLOSION IN CALICHE BED.

The nitrate or saltpeter zone embraces an area in the north of Chile about 450 miles from one end to the other. The deposits are always at an altitude of from 3,600 to 13,000 feet, in a region of delightful climate, but devoid of vegetation.

In the oficinas machinery of the most economical and effective pattern is used, and the methods of refining the salt are according to the best researches of industrial chemistry. The same is true of the facilities for transportation to the steamer; many small but well-equipped railways are in operation in the fields, and they carry the finished product to the coast towns, from which they are finally shipped abroad. The consumption of nitrate by the larger countries is as follows: Great Britain takes about 40 per cent, Germany and the United States each about 20 per cent, France about 10 per cent, and the remainder goes elsewhere to such far-away places as Egypt, Japan, the Hawaiian Islands, and Australia. In fact, without nitrate the great agricultural producers can not advance.

Plants make use of nitrogen only when it is present in the soil in the form of nitrates, and nitrate of soda is the only fertilizer that contains this food in a suitable and available form. The manner of using it, once it is applied, is the subject of technical agricultural chemistry, but every year it is better understood and the results are therefore more satisfactory. On the first discovery of the value of nitrate it was scattered promiscuously to the soil, in the crude form taken just as it came from the native beds in Chile. As the industry advanced, it was found that it was more economical to export a purer mineral and that also the purer the mineral the more plant nourishment it offered, provided that the need of the plant was carefully investigated. The results have been a more highly developed agriculture and the saving of certain by-products, of which iodine is one, the profit from which aids the manufacture. Another use for nitrate is in the manufacture of nitric acid and ultimately of many kinds of nitroexplosives, so that it is not improbable that the very same chemical, buried for ages in the ground of Chile, may be carried abroad as nitrate, made into a powerful powder, brought back to the barren hills of this part of South America, and with its newly acquired titanic force employed to dislodge the accumulations in other nitrate beds only a few rods from which it originally came.



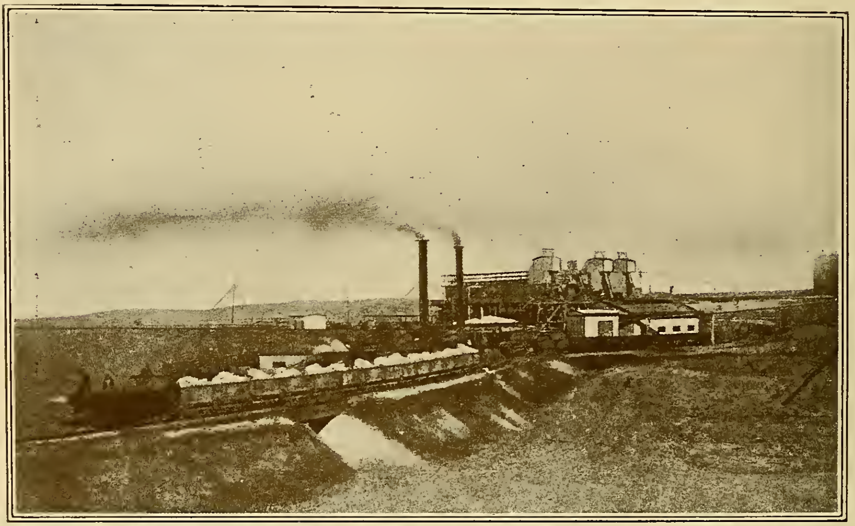
PACKING NITRATE INTO BAGS.

The nitrate industry of Chile is the one highly organized and economically developed business of the nation. It is and has for many years been the chief dependable source of the country's income. Of the $120,000,000 exports for the year 1910, the value of nitrate alone exceeded $86,000,000, or more than 70 per cent of the Republic's total export trade.

These fields were at first considered worthless. Now they bring a high price and are, in fact, obtainable only by permission of the Government of Chile. This rule has been established and enforced because Chile does not wish irresponsible exploitation of such natural but seemingly exhaustible riches, and because by rational control the market will not be disturbed by too much nitrate. Moreover, Chile derives a noticeable part of its income from the export tax on nitrate, and it is much better by regulating this industry thus to have the nation's finances systematically adjusted from year to year.

COAL MINING is the next most important mineral industry of Chile, but the product of the national deposits do not by any means meet the country's demand for coal. Nevertheless Chile is as yet the only country in South America in which coal is commercially mined with regularity, and therefore able to supply local consumers directly. The total consumption of coal for the year was about 2,270,000 tons, of which almost 1,000,000 was mined in Chile, and the rest imported, coming chiefly from England and Australia.

The coal deposits of the Republic are in the southern-central section, the largest fields being in the neighborhood of Concepcion. The existence of coal has been known since the conquest, but actual mining on a large scale did not begin until the year 1840. Most of the veins worked for commercial purposes are close to the sea and, in fact, a majority of the coal lands are beneath the sea, but many deposits are known to exist in the interior, and it is only the cost of mining that for the present prevents development with greater liberality. The largest output is in the Department of Lautaro.



TRAINLOAD OF NITRATE.

The machinery and methods of refining the salt are according to the most modern patterns and best researches of industrial chemistry. The same is true of the transportation facilities; many small but well-equipped railways are in operation in the fields, and they carry the finished product to the coast towns, from which they are finally shipped abroad.

Anthracite has been mined to a certain extent, but while the coal is well adapted for domestic use, the high cost of production makes competition with foreign coals of the same grade impossible. The grade of the article mined is called a steam coal, and is quite serviceable for manufacturing and steamship use. One reason why such a large proportion of coal is imported is that vessels come to Chile in order to load with nitrates, and, as they might otherwise be empty on the outer voyage, they then carry coal as cheap cargo. Coal brings from $6.50 to $7.50 (gold) per ton delivered in Valparaiso, and there is a steady demand for it whenever delivered. At present there is no duty on it, but mining interests of the country are advocating a duty to compel greater consumption of the native article.

Borates and sulphur are mined, although not in sufficient quantities to meet local demands in all cases. Gold was discovered in ancient times, and during the eighteenth century a considerable amount of metal was produced, but there has been less mining of that metal than formerly. Common salt is found in abundance, and the production has increased so that it has become an article of export. Manganese, cobalt, and silver are also mined, the last named having contributed much to the wealth of the country, although of late years the total has declined. Copper is one of the famed mineral products now recovering its earlier importance.

Agriculture generally represents a high proportion of Chilean industry, and during 1910 every feature was encouraging. The area cultivated for wheat amounted to 914,128 hectares (hectare=2.47 acres), and, besides supplying the needs of the people, much was exported, being taken principally by England. Agricultural products amounted to $75,500,000 gold, and this included, in addition to wheat, corn, rye, oats, farinaceous and leguminous plants and forage plants, such products as grapes, honey, many of the subtropical and other fruits, sugar beets, tobacco, hemp, and honey. Chilean wine and honey are now exported. The pastoral industry of Chile, especially since the development of the immense grazing area in the neighborhood of Magellan Strait, has made admirable progress. Cattle and sheep thrive well in the southern part of the Republic, and Punta Arenas has become one of the first-class shipping ports of South America. Of wool alone 21,000,000 pounds were sent abroad from there, and chilled meat from Chile is becoming well known in foreign markets.

MINERS AT WORK ON COAL DEPOSITS OF THE COUSIÑO CO. AT LOTA, CHILE.

Coal was discovered in Lota about 1805, and the property was purchased by Don Matias Cousiño in 1855. A peculiar feature of the mines is that a very large part of the workings are now beneath the bed of the Pacific Ocean. The company owns an enormous landed property and employs at least 6,000 men.

In close relation to the stock-raising activity of the country, the shoe and leather, and especially the tanning, industry is increasing. During 1910 tanning leather and the preparation of goods manufactured from it took second place in importance in the industrial products. There were employed in it 13,000 persons, the capital invested was about $12,500,000 gold, and the yearly output amounted to about $20,000,000 gold. The first shoe factory utilizing machinery was started not so long ago in Valdivia, and now there are more than 22 factories of various sizes in different cities of the Republic. Most of the machinery comes from the United States, but both France and England supply noticeable quantities.

That Chile should be considered as an industrial country is witnessed by the fact that manufactured products amounted in 1910 to about $98,500,000 gold, from 5,321 factories, representing a capital of over $90,000,000 and a yearly output of almost $130,000,000. Of raw material originating in Chile $46,000,000 worth was used, and the amount imported was valued at over $25,000,000. The number of persons engaged in such labor was 75,816, and they received in wages $17,000,000. There were 2,412 machines and motors of all kinds, with a horsepower of 48,914.

The most important class of factory is that for supplying the necessaries of life. For this purpose there were 776 establishments, with a capital of over $40,000,000 gold and a yearly output of $50,000,000. The second in importance is the leather industry already mentioned. The third is embraced under the general term of clothing and textiles, for which there is a working capital of $8,500,000 and a yearly output of about $14,000,000. The fourth group is that for woodworking and furniture, with a capital of $12,000,000 and a yearly output of over $10,000,000. A paper factory is proposed, for the importation of paper is heavy, and Chile is fortunate in possessing sufficient material from its timber regions to supply pulp mills when established. In the mines 60,000 men are occupied, and in the railroads 65,000, exclusive of manufacturing. The largest number of working persons is in the textile and clothing industry, 13,400; then in the tanning and leather trades, 13,000, and in domestic supplies, 12,000. Wages have in practically all instances advanced, and business conditions have steadily improved throughout the year.

RAILWAYS AND INTERIOR WATERWAYS.

The privately owned railways in Chile had, on January 1, 1911, a length of 3,078 kilometers (1,913 miles). At the same time the Government-owned railways amounted to 2,672 kilometers (1,660 miles). The total of railways in operation at the end of the year is therefore 5,750 kilometers (3,573 miles). On the Government railways the additions during the year were of 253 kilometers (157 miles).

In 1910 Government engineers completed surveys on nine short or feeder lines to the trunk system of the Government of the Republic known as the Longitudinal; these have a length of 406 kilometers (252 miles). Other surveys are now under way for 400 kilometers (248 miles). Concessions were granted during the year to construct private lines amounting to 338 kilometers (210 miles).

This Longitudinal Railway is the plan toward which the nation is persistently devoting its energies. The peculiar contour of the country has hitherto confined communication largely to the coast line, except south of Santiago through the central valley, but the policy of the Government is to develop means whereby the extreme north and the extreme south may be in touch with the center, altogether on land. Therefore it is extending this railway system as rapidly as possible. The distance from Arica in the north to Puerto Montt in the south is 3,431 kilometers (2,132 miles), of which about 1,770 kilometers (1,100 miles) are in operation and 1,368 kilometers (850 miles) are under construction, while the remainder is being surveyed. The railways from the coast to the interior are chiefly private lines, serving special interests such as the nitrate fields, but the Government controls the railway between Santiago and Valparaiso, and has purchased the Copiapo Railway.

The event of particular importance in Chile railway history of 1910 was the opening of the tunnel through the Andes, in conjunction with the railway interests in the

Argentine Republic (see Argentina, railways). Development for the next few years contemplates the construction of two new trans-Andean railways to connect Chile and Argentina. One of these is planned through the mountains about 300 miles north of Santiago, and the other about 400 miles to the south of the capital. The north line will bring into close touch the nitrate fields of Chile and the agricultural sections of Argentina, to the advantage of both.

Construction on the railway from Arica to La Paz in Bolivia is progressing, and while no official announcement is made of the opening date, which was at first set for the latter part of 1911, it is now confidently expected that the line will be ready for traffic before the year closes. Work is carried on from both the Chilean and the Bolivian sides, in Bolivia over 150 kilometers (93 miles) of track having been laid. In Chile, so great are some of the gradients that about 30 kilometers (17 miles) are to be of the cogwheel type.

There are a number of navigable rivers in Chile, the most important of which are the Bueno, Maule, Cautin, Bio-Bio, and Valdivia. They rise in the mountains and empty into the Pacific Ocean, running distances varying from 23 to 150 miles, their total navigable length amounting to 972 miles.

THE PRESS OF CHILE.

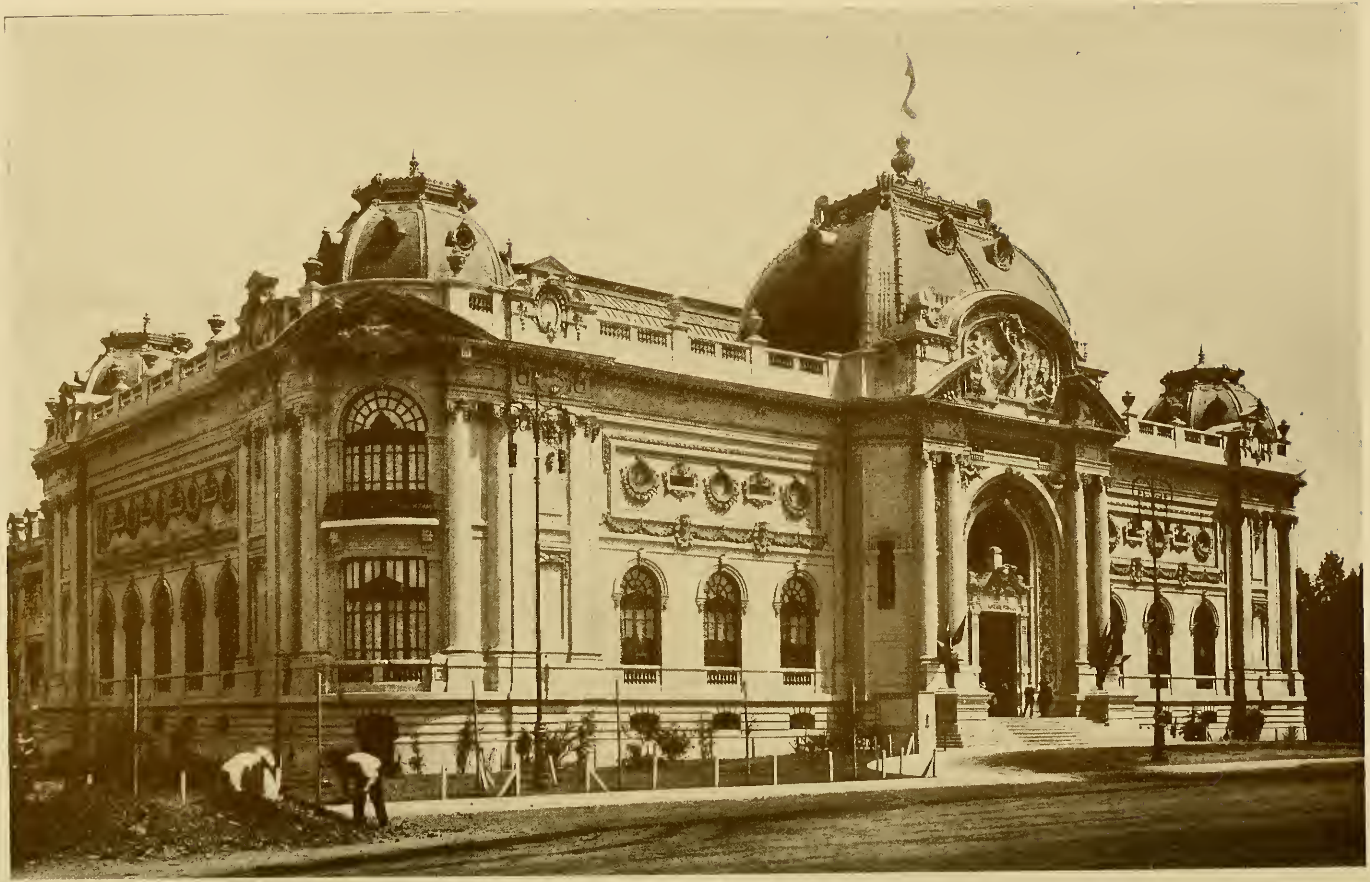
During the colonial period of Chile the introduction of printed matter was extremely limited and subject to a strict censorship, often ludicrous in its inefficacy. The better classes in the country read with the intellectual insight characteristic of the Latin races, and as the philosophy and criticism of the eighteenth century made their way through Europe, the people in South America in one way or another obtained access to the books containing them and caught the spirit. A powerful influence on the coming nationality was thus exercised.

The printing press is supposed to have been introduced into Chile in 1749, but the products from it were limited at first to books dealing with religious matters, to public documents, to studies in history, and only rarely to pamphlets touching on the vital subjects of the day. Society was gradually expanding, but meanwhile ideas were slowly spreading. What has been called the formative stage of the Patria vieja is comprised between 1810, the date of the declaration of independence, and 1814. This period saw the end of petty rivalries between the conservative and liberal elements of Chilean society, and during this period the demand for active, alive, and modern literature, edited and printed locally, became irresistible. Then the press was born.

La Aurora was the first newspaper of Chile. The initial number was dated February 13, 1812, and under the genius of Buena Muerte it at once reflected the sentiments of the revolutionary patriots and in general the spirit of the age. After the Aurora came the Constitución in 1812 and El Monitor, founded in 1814, which was frankly against the colonial government and therefore ardently desirous of national independence.

With the political crises of the new Republic for the next generation, periodicals sprang up in abundance, but they scarcely lived out the times. It is a proud boast of the country, however, that among the editors, writers, and contributors were numbered many of the famous men of South American history—Camilio Henriquez, Egaña, and Bello, among Chilenos; Irisarri from Guatemala, Lozier from France, Mora from Spain, and, best of all, Sarmiento and Bartolomé Mitre from Argentina. It would be impossible to name the host of illustrious women and men who guided the thought of Chile through the newspapers of the early part of the nineteenth century. They established a high mark for journalism which can never be forgotten.

One newspaper at least has had an uninterrupted existence since those early days. This is El Mercurio, the oldest periodical in Chile, founded in Valparaiso September



NEW PALACE OF FINE ARTS, SANTIAGO DE CHILE.

12, 1827. It now has allied publications under the same name in Santiago, Antofagasta, and Valdivia, with an afternoon edition under a different name. Other papers followed during the latter half of the century, and they keep the reading public well informed of affairs both at home and abroad.

In 1910, the centennial year, there were in Chile 419 periodical publications. Dailies, 70; semiweekly, 19; weekly, 175; biweekly, 56; semimonthlies, 29; and monthlies, reviews, annuals, etc., 70. These were issued from all parts of the country, Santiago, the capital, naturally leading, with 100, followed by Coquimbo 37, Valparaiso 32, Concepcion 23, and other cities with less than 20. An interesting feature of Chilean journalism is the strong character of illustrated weekly papers devoted to politics, society, sport, and the home, with a goodly share of comic or humorous sheets among them. These latter have a wide circulation and help to interest and amuse a large part of the Pacific slope of South America.

The type of daily newspaper in Chile is rather small, varying from 16 inches by 22 inches in size to somewhat larger, of 12 pages on the average, with six to seven columns to a page. The first page contains, as a rule, the most interesting news of the day, a résumé, perhaps, and a few advertisements. Other news is scattered over the remaining pages, and advertisements are placed where they would seem to do the most good. In the capital considerable space is given to the transactions of Congress when in session. Illustrations, although not very freely used, are nevertheless sufficient to enliven the page. Several of the weekly and monthly periodicals have the shape so well known in the same class in the United States. They are liberally illustrated by photographs or reproduced pictures. Other weeklies, especially those of a humorous type, are smaller, about 7 by 10 inches, making up in number of pages what they lack in size of sheet. In these illustrations take up as much space as reading matter, and advertisements receive as many pages as both together. These advertisements present to the public about everything they ought or would like to buy, and it is as much pleasure looking at them as at similar advertisements in the best publications of the United States and Europe.

The rate for an advertisement in Chilean papers depends, as elsewhere, upon the circulation of the paper, the space it occupies, and the number of times it appears. In papers outside of the capital, Santiago, with the exception of those in Valparaiso, the circulation ranges from 3,000 to 10,000. The line, or column centimeter, seems to be the unit of space. The line costs about 5 to 10 cents gold each insertion, the centimeter 10 to 20 cents gold. The better daily or weekly metropolitan papers have a circulation of from 3,000 to 40,000, which carries all over the country and to no small extent into other Republics of the continent. They are exhaustively read, and their advertisements attract a great deal of attention both on account of their interesting form, being profusely illustrated, and for the sake of the information they afford on what the people wish to buy. The advertising rate, per column centimeter (about two-fifths inch), is equivalent to 30 and 35 cents gold each issue, or by the page from $10 gold to $50, according to location. Reductions are, of course, allowed for time contracts. It is worth remarking that in the high-class publications of Chile the eye of the reader is irresistibly drawn to the advertisements, just as it is to the same grade of paper in the United States.

PERU

The Republic of Peru, occupying territory on the Pacific Ocean, about 1,000 miles in length by 700 miles in width, extends over 679,600 square miles. It has a population of approximately 4,500,000, or 6.6 per square mile. Geographically, the country may be divided into three zones: The dry zone, extending along the coast to the foot of the Andes, in which practically nothing can be raised without irrigation; the extremely fertile and healthful plateaus, or tablelands, between the three mountain ranges; and the vast, luxuriant forests on the eastern slopes. Peruvian cotton and cane sugar are the principal agricultural products exported. The mines produce silver, copper, gold, iron, coal, and petroleum in considerable quantities. Cinchona bark, coca, rubber, guano, hides, and Panama hats also occupy important places in the products of the country.

COAT OF ARMS OF PERU.

The constitution of the Republic proclaimed on November 10, 1860, provides for three branches of government—the legislative, executive, and judicial branches. The legislative power is vested in the National Congress consisting of two chambers, the Senate and the House of Representatives, the former composed of 52 members and the latter of 116. Both senators and deputies are elected by direct popular vote for a term of six years, deputies in the proportion of one for every 30,000 inhabitants or fraction exceeding 15,000. Both chambers are renewed by thirds every two years. Every citizen over 21 years of age who can read and write is entitled to vote. Congress meets annually on July 28 for 90 days. This period can only be extended by an extra session of 45 days called by the President.

The President, together with two Vice Presidents, are also elected by popular vote for a term of four years and may not be reelected for a second consecutive term. The President receives a salary of $15,000 per annum and an allowance of $9,000 for expenses. He is assisted by a cabinet of 6 ministers who, though appointed by him, are also responsible to the National Congress. The President and his present cabinet are as follows:

President: Sr. Augusto B. Leguía (inaugurated Sept. 24, 1908).
First Vice President: Sr. Eugenio Larrabure y Unanue.
Second Vice President: Dr. Belisario Sosa.

Minister of Government and Police: Sr. Juan Salazar Oyárzabal.

Minister of Justice and Public Instruction: Sr. Augustin Ganoza.

Minister of Foreign Affairs: Dr. Germán Leguía Martínez.

Minister of War and Navy: Sr. Juan Manuel de la Torre.

Minister of the Treasury and Commerce: Sr. Augustin de la Torre Gonzalez.

Minister of Public Works and Promotion: Sr. Manuel I. Castillo.

The Department of Government and Police (Ministerio de Gobierno y Policía) is charged with the administration of the Departments, Provinces, and with the supervision of the councils of Departments, Provinces, and municipalities, which are elected by the people. This Department has also under its jurisdiction the post offices and telegraph stations. The maintenance of public order and the supervision of the national and police departments are also part of its duties.

The Department of Justice and Public Instruction (Ministerio de Justicia é Instrucción Pública) is intrusted with the regulation and administration of all matters pertaining to justice, education, and public worship. The Universities at Lima, and at Cuzco, Arequipa, Trujillo, and the National Library, all fall within the scope of this division.

To the Department of Foreign Affairs (Ministerio de Relaciones Exteriores) are delegated matters of international import, the maintenance of cordial relations with foreign powers, boundary questions, and the diplomatic and consular corps.

PRESIDENT AUGUSTO B. LEGUÍA.

The Department of War and Navy (Ministerio de Guerra y Marina) has under its direction matters pertaining to the national defense, the training of the army and navy forces, maintenance of military and naval schools and colleges; also the administration of ports and coast and lighthouse service.

The care of the national finances, the control of customshouses, the annual budget, and the compilation of commercial statistics are the chief functions of the Department of the Treasury and Commerce (Ministerio de Hacienda y Comercio). In addition, it has also jurisdiction over corporations, public accounts of the various departments, patents and trade-mark regulations, and the regulation of commerce and industry. The salt monopoly and the exploitation of the guano deposits are also responsible to this department.

The Department of Public Works and Promotion (Ministerio de Obras Públicas y Fomento) is charged with the promotion of commerce and industries, the development of the natural resources, means of transportation and communication, and public works. Public buildings, general improvements, mines, agriculture, roads, bridges, and sewerage are among the functions which are administered by this division.

The federal judiciary is composed of the national supreme court, superior courts, the courts of first instance, and the municipal courts. The justices of the supreme court are elected by the Congress, and the other justices are appointed by the President of the Republic.

The personnel of the army on a peace footing numbers a little over 4,000 officers and men. Every citizen of Peru is liable to military service from his 19th to 50th year. The Peruvian Navy comprises 14 vessels.

The Government owns and operates the postal and telegraph lines in Peru, with the exception of the railway telegraphs. According to the President's message (July 28, 1910), there were established during the year 50 new offices, 19 of which were for postal service. This, added to the existing 639 offices, made a total of 658 post offices in the country. The message also states that there were added 593 kilometers of telegraph lines, bringing the total to 10,427 kilometers, or 6,479 miles. There are also 23 central telegraph offices, 231 local offices, and 20 inspection districts. Telephone companies are established in the centers and furnish local and interurban communication, there being over 2,500 telephones installed throughout the Republic.

There is also an overland wireless-telegraph system between Iquitos and Puerto Bermudez, about 500 miles apart. A station is also planned on San Cristobal Hill to enable direct wireless communication from Lima to Iquitos, a distance of some 700 miles apart.

The Republic is divided into 19 Departments, two coast Provinces, and one Constitutional Province, which are subdivided into districts. The executive authority of each Department is vested in a prefect appointed by the President of the Republic, while a subprefect governs the Province and the governor the district.

PERU IN 1910.

The year 1910 was an active one in the Republic. Among the earliest accomplishments of the Government was the final exchange of the ratified treaty with the Republic of Brazil, by which the boundary question between the two countries was completely settled, and Peru therefore took possession of the territory allotted to it. Thus with two neighboring Republics (Bolivia in 1909) the boundaries are fixed. About the same time the convention was signed in Bogota by which Peru and Colombia agreed to submit to arbitration certain points that had been under dispute between them, and the minister of foreign affairs of Brazil was chosen as the presiding officer of the mixed tribunal. With Ecuador the disturbances over the boundary were ultimately quieted through the mediation of Argentina, Brazil, and the United States, so that there is great prospect that a thorough and impartial judgment on the matter will result. With Chile the Government of Peru maintained no diplomatic relations during the year, and the status quo ante was preserved. In other foreign affairs Peru held cordial relations. The Republic was represented at the Pan American Conference at Buenos Aires, and had delegates at several international congresses abroad.

In commercial and industrial matters, Peru was noticeably encouraged at the end of 1910. The foreign trade was greater than that for 1909, both exports and imports having been stimulated. Internal commerce was also brisk, and new sources of activity were developed. The petroleum industry, for instance, has become established on a firm footing, and the country is able to state that its oil field is now the second in the world as regards extent. Coal is also being worked systematically, and during the year commercial advantage was begun to be taken of the Peruvian coal desposits. Both cotton and sugar have added to Peru's exports this year. An influence of advantage for the country in general was the activity of the Peruvian Steamship Co., which has recently promoted the coastwise service as well as communication between Callao and Panama, Callao and Valparaiso, under the national flag.

In financial matters Peru remains on a secure footing, and the national income so far as is known seems to have exceeded the revenue of the previous year, while the expense estimates in the budget were fully met by the amount collected from regular sources, leaving a surplus at the end of the year.

Persistent attention was given to the educational problems confronting the Government. Old school buildings were repaired or kept in order and new ones were constructed as far as funds were available. Kindergarten and normal-school instruction were particularly advanced, for these branches of public instruction are recognized in Peru as most powerful aids to the progress desired for the people. The ancient university of San Marcos in Lima has been enlarged, and the university in Cuzco, for a time inactive, was reopened during the year.

FINANCE.

According to the message of the President, Sr. Don Augusto B. Leguia, to the National Congress on July 28, 1911, the receipts of the Government for the year 1910 amounted to 2,795,775.2.66 libras, and the expenditures to 2,685,322.1.97 libras, thus showing a surplus of 110,453.0.69 libras. The budget estimates for the year were receipts and expenditures to balance at 2,784,513.1.43 libras.

The Peruvian libra is equivalent in value to the British pound sterling, but is divided into 10 sols, and the sol into 100 centimos. The figures given above are read libras, sols, and centimos as set off by the decimal points. On the basis of the libra equivalent to $4.86 United States gold the receipts for the year were $13,587.467.79, the expenditures $13,050,665.88, and the surplus $536,801.91.

The message does not give the complete details of receipts and expenditures; but the following were the principal sources of revenues:

Customhouse receipts	£1, 243, 572. 0. 00
From National Tax Collection Co	1, 050, 745. 0. 00
Salt monopoly	99, 032. 0. 00
Telegraphs	28, 324. 3. 99
Post offices	93, 078. 2. 63

The revenues collected by customhouses exceeded the amount collected in the preceding year by £123,175. The receipts from telegraphs exceeded the estimates for the year by £4,324.3.99. The estimate of revenues for post offices was £92,448. There was a falling off in the sale of stamps amounting to £4,995.9.49, but an increase in the other postal receipts of £5,626.2.12.

The amount of the revenue from the liquor tax is not given, but it is stated that it exceeded the receipts of the preceding year by £20,500.

The National Tax Collection Co. is a private stock organization established in 1900, with a capital of £300,000, which collects most of the internal taxes on a commission basis.

DEBT.

The foreign debt of £600,000, of November 3, 1905, with the German Transatlantic Bank, was canceled by a loan placed with the "Banque de Paris" and "Société Générale," in accordance with the law of December 11, 1909. This loan is to be amortized in 28½ years, and draws an interest of 5½ per cent.

This loan, together with a loan of £80,000,000 on account of Guadelupe College, constitutes the foreign debt of Peru.

The internal debt consists of two issues authorized, respectively, by the laws of June 12, 1889, and December 17, 1898. According to the message of President Leguia, above referred to, the face value of the first amounts to £2,660,645. The bonds of this loan draw an annual interest of 1 per cent, and their present market value is approximately £360,000.

The face value of the second issue amounts to £3,900,240. Of this amount there has been redeemed £2,757,655, leaving outstanding £1,142,585. The bonds of this loan draw no interest. The market value is approximately £78,000.

FOREIGN COMMERCE.

According to the message of President Leguia to the National Congress on July 28, 1911, the foreign commerce of Peru for the year 1910 amounted to 11,039,562 libras, of which 4,631,280 libras represented imports and 6,408,282 libras exports. The total according to the message exceeded the total of 1909 by 548,656 libras.

No details other than the totals above are yet available of the trade of 1910, nor have the details for 1909 been officially published. As indicated in the message the total foreign trade for 1909 was 10,490,906 libras.

Estimating the libra at $4.86 United States gold, the same as the British pound sterling, the value of the Peruvian foreign trade for the year 1910 was: Imports, $22,508,021; exports, $31,144,250; total, $53,652,271.

United States Consul General W. H. Robertson of Callao in a report dated July 14, 1911, gives for the year 1909 the foreign trade as follows: Imports, 4,298,627 libras; exports, 6,492,670 libras; total, 10,791,297 libras. This total exceeds the total indicated by President Leguia by over 300,000 libras.

The following table shows the imports for the years 1907 and 1909 by countries: The figures in this and the following tables for 1907 are official and for 1909 are from Mr. Robertson's report. Figures for 1908 are not available.

Countries.	1907	1909
United Kingdom	[1] £1,634,129.3.47	£1,567,897.8.56
United States	1,184,667.6.16	846,127.7.33
Germany	893,433.9.39	687,232.8.33
Australia	318,462.9.69	249.7.92
France	291,958.3.33	195,579.4.84
Belgium	259,910.6.82	247,324.4.32
Chile	242,732.4.42	182,201.6.59
Italia	181,621.2.78	150,711.4.87
Hong Kong	173,330.3.36	90,921.4.33
Ecuador	66,630.5.72	33,982.5.71
British India	60,256.8.32	31,843.2.40
Spain	60,329.2.12	52,519.0.15
Portugal	45,275.4.57	28,809.3.04
Argentina	25,132.3.28	117,864.5.58
China	17,336.0.56	20,345.3.40
Brazil	16,544.5.41	17,202.3.46
Canada	8,768.5.80	800.0.00
Japan	8,223.1.20	8,654.3.40
Salvador	6,095.0.29	4,914.7.84
Netherland	5,571.0.34	589.1.43
Cuba	5,233.2.17	2,740.1.17
All other countries	14,108.8.62	8,215.9.80
Total	5,519,751.7.82	4,298,627.4.47

[1] The decimal to read 3 sols 47 centimos.

The total imports for 1908 excluding the Department of Laredo were £5,295,625. The imports into the Department of Laredo if added would probably raise the figure to nearly £6,000,000.

The imports by customhouses for the years 1907 and 1909 were as follows:

Customhouses.	1907	1909
Callao	[1] £3,383,378.2.13	£2,709,321.6.13
Iquitos	710,612.5.77	477,468.2.51
Mollendo	808,447.7.53	473,914.1.01
Salaverry	167,111.4.96	182,565.1.47
Paita	176,956.2.44	134,791.6.40
Eten	72,787.3.75	110,344.1.95
Pacasmayo	59,328.7.45	106,671.6.87
Pisco	112,885.4.23	86,626.3.70
Ilo	13,750.0.06	8,306.1.45
Leticia	5,185.6.91	4,544.8.10
Buena Vista	1,044.0.33	2,009.1.41
Puno	916.1.22	551.6.04
Madre de Dios		342.9.83
Agency of Customhouse	244.8.85	348.8.70
Ancomarco	385.6.91	72.5.74
Zarumilla	1,131.1.56	550.4.86
Tumbez	586.8.61	197.8.30
Total	5,519,751.7.82	4,298,627.4.47

[1] The decimal to read 2 sols 13 centimos.

In 1907 the principal articles of imports and their values from the leading countries were as follows (under this heading no figures are available for any year since 1907):

United Kingdom:

Textiles, of cotton	£404,820.1.69
Textiles, of wool	137,396.2.60
Coal	96,677.5.58
Machinery and accessories	76,094.4.03
Explosives	47,568.0.50
Hemp and jute and manufactures	41,651.9.74
Drugs	40,312.5.51
Stones and earths	30,067.9.46
Yarn and thread	28,923.8.92

United Kingdom—Continued.		
Vegetable products		£22, 524. 6. 75
Boots and shoes		20, 199. 3. 96
Paints and varnish		19, 116. 6. 29
Hardware		17, 227. 2. 33
Wines and liquors		14, 771. 3. 30
Milk and dairy products		13, 297. 2. 68
Paper and manufactures		12, 929. 8. 14
Rice		12, 205, 1. 00
Oils		10, 100. 2. 57
Wax and stearin		9, 813. 9. 19
Leather and leather goods		9, 026. 9. 67
Perfumery		8, 337. 7. 30
Arms and ammunition		8, 396. 7. 87
Meats		7, 848. 7. 27
Hats		5, 695. 4. 47
Biscuits and crackers		511. 8. 12
United States:		
Machinery		159, 650. 9. 12
Wood		143, 738. 0. 57
Vehicles		59, 571. 6. 80
Tar, pitch, etc		47, 673. 4. 26
Drugs		43, 204. 6. 80
Stones and earths		38, 036. 1. 05
Lard		36, 762. 4. 09
Paper and manufactures		23, 295. 3. 56
Hardware		20, 797. 0. 85
Arms and ammunition		19, 157. 1. 74
Oils		16, 626. 8. 13
Textiles—		
Cotton	£23, 105. 7. 35	
Wool	3, 272. 0. 83	
Silk	554. 8. 85	
Others	898. 0. 00	
		27, 830. 7. 03
Meats		14, 473. 0. 30
Breadstuffs		12, 466. 0. 12
Perfumery		12, 246. 3. 90
Cordage		11, 563. 5. 80
Shoes and boots		10, 804. 1. 79
Coal		8, 914. 5. 56
Wine and liquors		8, 511. 8. 93
Biscuits and crackers		7, 216. 2. 14
Soap		6, 188. 0. 75
Instruments and apparatus		5, 273. 0. 16
Germany:		
Textiles—		
Cotton	£116, 844. 0. 97	
Wool	80, 085. 1. 89	
Silk	35, 900. 8. 71	
Others	13, 754. 9. 83	
		246, 585. 1. 40
Minerals, metals, and manufactures		86, 585. 1. 40
Paper and manufactures		55, 484. 4. 87

Germany—Continued.		
Stones and earths		£53, 618. 6. 12
Machinery and accessories		38, 115. 5. 47
Explosives		37, 806. 4. 51
Drugs		25, 486. 7. 87
Jewelry		23, 263. 4. 07
Instruments and apparatus		21, 618. 2. 33
Wines and liquors		21, 527. 7. 86
Wood		20, 637. 9. 70
Rice		15, 740. 6. 10
Milk and dairy products		14, 863. 0. 21
Coal		13, 585. 2. 77
Yarn and thread		13, 542. 0. 32
Leather and manufactures		11, 785. 5. 76
Sugar		11, 458. 5. 76
Vegetable products		10, 148. 2. 82
Fish		9, 858. 7. 95
Toys		8, 056. 1. 52
Hardware		6, 889. 3. 26
Paints and varnish		6, 666. 5. 30
France:		
Textiles—		
Cotton	£19, 682. 9. 16	
Wool	15, 651. 7. 02	
Silk	15, 964. 5. 02	
Others	8, 855. 4. 24	
		60, 154. 5. 48
Wines and liquors		36, 683. 1. 05
Minerals, metals, and manufactures		32, 703. 2. 71
Drugs		26, 898. 1. 55
Paper and manufactures		17, 310. 4. 16
Machinery and accessories		10, 138. 9. 55
Perfumery		8, 247. 8. 70
Stones and earths		7, 147. 1. 20
Shoes and boots		6, 137. 9. 55
Jewelry		5, 072. 5. 61
Belgium:		
Minerals, metals, and manufactures		99, 102. 7. 77
Stones and earths		43, 799. 3. 36
Textiles—		
Cotton	£16, 137. 0. 29	
Wool	15, 886. 8. 93	
Silk	2, 481. 6. 90	
Others	1, 086. 6. 80	
		35, 592. 2. 54
Paper and manufactures		13, 396. 2. 54
Machinery		7, 534. 7. 80
Drugs		4, 318. 3. 11
Wines and liquors		4, 273. 9. 16

From Australia the imports were chiefly: Coal, £118,591.744, and wheat, £195,641.117. From Chile: Minerals and metals, £142,920.032; rice, £25,973.098; wood, £12,377.504; and wheat, £11,401.415. From Italy: Textiles, £70,134.209; and from Hongkong, rice, £120,263.905.

EXPORTS.

The following table shows the exports for the years 1907 and 1909 by countries (figures for 1908 are not available):

Countries.	1907	1909
United Kingdom	£2,433,913.1.40	£2,672,540.1.42
United States	1,367,097.0.72	1,495,623.1.61
Chile	550,212.0.95	851,544.4.63
France	462,757.9.61	539,140.7.55
Germany	366,957.2.14	350,092.5.70
Belgium	268,571.8.84	42,192.8.58
Bolivia	103,094.3.99	203,306.5.23
Spain	59,258.5.94	44,383.5.82
Ecuador	25,214.9.01	18.634.4.19
Arica and Tacna	22,980.9.94	25,487.1.23
Netherlands	20,871.3.54	14,582.4.64
Japan	20,554.2.22	86,030.7.42
Cuba	12,272.0.00	....
Argentina	6,641.7.79	8,022.6.62
Italy	5,094.7.92	851.8.11
Panama	5,033.4.76	19,576.5.92
Barbados	4,775.0.00	70,366.1.28
Guatemala	2,617.5.82	20.0.00
All other countries	6,626.3.18	50,274.7.25
Total	5,744,544.7.77	6,492,670.7.20

The total exports for 1908 excluding the Department of Laredo were £5,375,712. The exports by customhouses for the years 1907 and 1909 were as follows:

Customhouses.	1907	1909
Callao	£1,979,254.5.15	£1,516,099.1.45
Iquitos	820,913.5.75	1,029,708.7.75
Mollendo	582,435.2.30	591,593.3.38
Salaverry	329,541.4.06	456,278.5.50
Paita	304,334.7.01	461,881.1.03
Eten	379,721.3.90	307,927.8.98
Pacasmayo	58,838.2.46	51,159.7.39
Pisco	167,848.0.47	371,546.5.71
Ilo	9,385.0.31	6,069.7.27
Leticia	108,581.9.10	....
Buena Vista	10,125.4.34	12,930.6.93
Puno	33,688.3.44	51,382.6.94
Casma	58,592.4.58	63,244.2.70
Agency of customhouse	53,345.1.21	122,239.8.78
Ancomarco	13,513.8.91	10,300.6.74
Tumbez	13,308.9.30	10,835.0.86
Talara	9,122.1.00	146,623.4.32
Chimbote	48,139.4.69	67,036.2.72
Samanco	43,258,3.88	71,849.4.29
Lomas	13,293.2.90	23,770.9.00
Chala	10,987.7.18	6,517.1.86
Cerro azul	183,723.7.94	188,719.2.57
Huacha	69,467.1.20	118,507.1.35
Huanchaco	133,856.7.05	169,287.8.11
Supe	123,836.0.20	185,547.7.32
Tambo de Mora	102,204.0.09	247,772.5.55
All others	83,227.9.35	203,840.8.70
Total	5,744,544.7.77	6,492,670.7.20

For the year 1907 the principal exports by articles and countries were: Minerals and metals: Total, £2,003,689; United States, £999,336; United Kingdom, £727,645. Rubber: Total, £954,623; United Kingdom, £496,451; United States, £17,118. France: £11,327. Sugar: Total, £827,298; United Kingdom, £302,466; United States, £59,203. Cotton: Total, £516,257; United Kingdom, £361,086. Wool: Total, £428,129; United Kingdom, £345,099. Guano: Total, £392,129; United Kingdom, £147,053. Hides: Total, £124,676; United States, £25,321; United Kingdom, £9,847. Hats: Total, £96,938; United Kingdom, £21,767.

PRODUCTS AND INDUSTRIES.

The great sources of national wealth are mining and agriculture, with mining in the first place. The total annual mineral output of the country is valued at about $25,000,000. Copper occupies first place, followed by silver, crude petroleum, coal, gold, and lead.

The Department of Junin, in which is located the celebrated Cerro de Pasco mining district, stands at the head of producing sections, the silver output for one year being 108,026 kilograms, 17,151 tons of copper, 169,368 tons of coal, and 4,970 tons of lead.

The developments in copper mining are particularly numerous and important. The company operating at Cerro de Pasco produces approximately 40 tons of copper daily, or an annual output of over 15,000 tons.

CHUTE FOR BRINGING DOWN GUANO.

A lucrative source of the annual income of Peru lies in the guano deposits which are being worked, under special contract, by the Peruvian Corporation. The revenue from this natural wealth is now over $1,500,000 a year.

The famous ore bodies of Cerro de Pasco are situated at the junction of the East and West Cordilleras and contain copper, silver, lead, gold, and several other minerals, among which is vanadium, recently discovered.

Silver is found throughout the Peruvian Andean region, commonly associated with lead or copper and frequently with both.

"Cascajo" is a silver-bearing mineral peculiar to Peru, and with copper forms the great deposit of the Cerro de Pasco district.

Puno produces 70 per cent of the total gold of the Republic, its deposits being very rich, though inadequately developed.

Petroleum production is increasing. The districts of Zorritos, Lobitos, Negritos, Pirin, Chimbote, Ica, and Puno, in southern Peru, near Lake Titicaca, are producing an annual output of over 1,000,000 barrels.

Anthracite coal is found in the Chimbote and Huarez districts, in Otuzco, Huamachuco, and elsewhere, and bituminous coal is to be found in Cajamarca, Ancachs, Ica, Arequipa, Puno, and Moquega.

A sulphur company in the Department of Piura is the only producer of this mineral, the plant having a capacity of 150 tons daily. The discovery of vanadium was made in 1904, and nearly 70 per cent of the world's output of vanadium now comes from Peru.

The working of the guano deposits of the Republic constitutes another important branch of industry, and within the last 18 years the Peruvian Corporation has extracted a third of the 3,000,000 tons allowed under its contract.

Peru's leading crops, sugar, cotton, and rice, are irrigation crops.

Sugar growing is carried on chiefly in the coast regions, the total area devoted to the industry being about 200,000 acres. The average annual crop of sugar is 150,000 tons. There are about 50 plantations, the product being largely exported to England and Chile for refining.

The best grades of cotton are grown near Piura and shipped from Paita, the high quality being attributable to the peculiarities of soil and climate for which this narrow belt of coast land is noted. Five good crops may be obtained from one planting, the third year representing the maximum yield. Irrigation is being applied to increasing the cultivable areas in the Departments of Piura and of Lima, a canal 22 miles long forming the base of distribution in the former locality.

THE ZORRITOS OIL FIELDS, PERU.

Of the approximately 600 oil wells scattered throughout the oil-bearing regions of Peru, over 300 producing wells have been sunk in this district.

Cotton manufacturing is carried on in well-equipped factories in Lima, Arequipa, and Ica. The annual consumption of raw material is about 3,000 tons, the native product being classed as superior to the imported article.

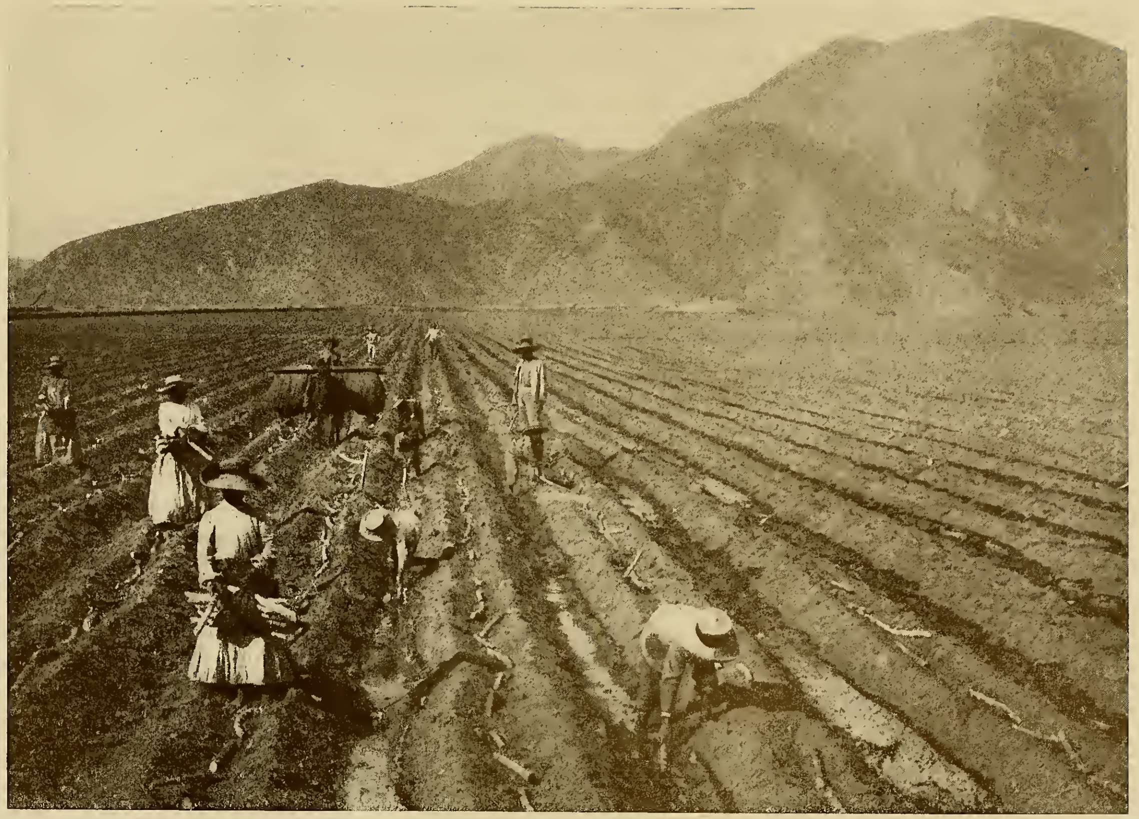
Tarra, or dividivi, the pods of a tree used for tanning, is native to Peru, being found chiefly in the Department of Ica.

The cultivation of coca (*Erythroxylon coca peruanus*), the plant from which medicinal cocaine is obtained, is an important industry in certain sections of Peru, principally the Cuzco Valley, there being about 25 factories devoted to this business.

Rice, tobacco, wheat, ramie, and maize are also grown, and silk culture and viticulture are engaging the attention of industrial enterprises.

The hide industry in Peru is one of growing importance. Exportations are considerable, while the resources warrant its further development.

The central market for goatskins is Piura, in northern Peru. The goat and kid skins of Piura are in great demand and considered especially valuable, owing to their



PLANTING SUGAR, SANTO CLARO, PERU. (SHOWING IRRIGATION.)

The cultivation of sugar has extended along the entire coast of Peru. In few countries are the climate and soil so propitious for the development of this industry. Under good cultivation these coastal lands yield from three to four short tons of sugar to the acre, a return which has not been surpassed in any part of the world. Irrigation works are being rapidly extended.

unusually fine texture, flexibility, extreme softness, and adaptability for handling' These skins are sought for by glove and fine leather makers. There are about 20 tanneries in the country.

The wool product represents an annual valuation of over $2,000,000, the export quantity being over 4,000 tons. Alpacas, sheep, and llamas are the wool-bearing animals of the country. The introduction of Patagonian sheep for crossbreeding is one of the recent developments of the pastoral industry.

Several woolen factories are operated, giving employment to a large number of workmen, and preparing about 600,000 kilograms of wool for the market annually. The total output, however, fails to meet local demands, and there is a large import trade under this head.

The manufacture of Panama hats is carried on with great success, large quantities being exported.

COTTON: A plant producing the finest quality of cotton is indigenous to Peru. The fibre of this *Gossypium peruvianum* so closely resembles wool that the entire product is utilized in the manufacture of woolen goods which are, in certain respects, improved by the admixture. This peculiar cotton commands a price 10 per cent higher than other qualities, and Peru is the sole source of the world's supply.

The use of cotton is universal. Yet we can not trace the origin of cotton cloth. It had been long in use in India before the conquest of that country by Alexander the Great. The writings of Herodotus and Pliny tell us that the usefulness of the fiber was known to the Greeks and Romans. Early explorers found it used by aboriginal West Indians. Cortes sent bales of beautifully woven cotton from Mexico to Spain, while Pizarro robbed the Incas of their store of the cloth. The huacas (tombs) of Peruvian Indians have yielded mummy-cloths of cotton, but those obtained from Egyptian tombs seem to have been linen, although it is probable cotton was known in that country from quite early times. Cotton was also known in China and Japan long ago, but it is with India that we must place the credit of the beginning of the world's present cotton industry.

Two thousand years before Europe had conceived the idea of applying mechanical energies to the manufacture of cotton, India had matured a system of hand spinning, weaving, and dying that furnished its myriad inhabitants with cotton cloths of many kinds. Of these the most remarkable was the sacred cloth made from the *Gossypium arboreum*, a beautiful purple-blossomed cotton tree, which supplies the material for the sacerdotal three-parted thread of the Brahman priests. Its construction symbolized their Trinity. Gossypium, the scientific and botanical name for the genus of the cotton plant, has been traced back to the Sanscrit, and the Latin word cossopium meaning the fleece worn. The word cotton is derived from the Arabic qutun, originally meaning flax. The plant is a member of the Malvaceæ or mallow family, which comprehends many "branches," one being the hollyhock. There have been many attempts to classify and limit the species of Gossypium, but no two authorities agree. A recent cataloguing of names gives 50 species as recognized and five times as many rejected or combined.

There are only four out of five or six species whose products enter into commerce, while the far largest proportion of these are the *G. herbaceum* and *G. barbadense*, upland and sea-island cotton, respectively. These two classes of cotton differ materially in their seed characteristics. The sea island has a small black seed from which the lint separates readily, while the upland cottons have large seeds, which are greenish in color and surrounded by a short dense fuzz beneath the long and more valuable lint. Both of the species are perennial in climates without frost, but in cultivation they are treated as annuals. The plants are shrubby, 3 to 10 feet high, more or less branched, and bear large alternate 3 to 5 lobed leaves, which, when held to the light, show numerous pellucid dots. The flowers, which resemble to a degree those of the hollyhock, mallow, and hibiscus, are white when newly open in the varieties of upland cotton, turning red with age and creamy yellow in the sea island, with a purplish spot at the base of the petals. The flowers are usually single in the axils of the leaves, except in those varieties designated "cluster types," in which a number are produced together. The flower develops into the "boll," which, for manufacturing purposes, is the most important, as it contains not only the seeds, but the floss. The pure white varieties of floss, obtained by careful cultivation and selection, are preferred; but brown and rust-colored varieties are of high industrial value.

Cotton needs the warm rays of the equatorial sun for its best development, but it will be found growing around the world in a belt roughly outlined by the parallels of almost 40° north latitude and 30° south.

The chief cotton-producing countries are the United States, British India, Egypt, Russia, China, Brazil, Mexico, Persia, Peru, Turkey, Africa, the West Indies, and Japan. Some cotton is also grown in Venezuela, Paraguay, Colombia, and Central America.

The fiber is the most valuable product of the cotton plant. Viewed under a good microscope it appears to be an irregular, flattened, twisted tube, the edges of which are somewhat thickened and corrugated. This twist distinguishes cotton from all other plants, and it is to this character that its superior qualities for spinning are due. The fiber varies from one-half to 2 inches in length and is exceedingly fine.

ALPACAS, PERU.

The wool of the alpaca is nearly a foot long, soft, and fine as silk. The great bulk of the annual production, in value between three and four million dollars, is exported. Very little goes to the United States.

The successful cultivation of cotton requires the highest agricultural knowledge and skill, combined with experience. A number of great inventions have marked epochs in the cotton industry; the most important one was the mechanical invention which seemed to spring Minerva-like, complete and whole, from the brain of Eli Whitney, in 1794—the cotton gin. This machine is in use to-day, essentially the same in all its main theory of construction as when first put into use by the inventor.

Experiments are now being carried on with a new mechanical invention that may mark another period in the cotton industry. This is the automobile cotton picker. The labor question, always serious in the cotton belt, will be answered with the successful construction of the machine referred to. Roughly, it is an automobile platform that is furnished with a suction-pump working through a contrivance resembling a garden hose and nozzle. The platform is driven around the cotton fields and the "bolls" touched with the nozzle and immediately the floss is sucked into a receptacle in the rear.

It is estimated that 4 men can do the work formerly assigned to 30, per day, with the automobile picker.

The usefulness of cotton does not end with its adaptability for spinning and textile manufacture. The by-products, if fully utilized, are calculated to increase the value of the cotton crop one-fourth. The cotton stalks and leaves have a considerable value as forage, fuel, and as a fertilizer.

However, next to the lint, the most valuable commercial product of the cotton plant is its seed. In 1880 the crushing of cotton seed and the extraction of the oil became a large independent business. To-day oil cake, which is a residuum of mealy substance resultant from extracting the oil from cotton seed, and this oil itself, augments very considerably the earning power of the modern cotton mill. The innumerable uses of cotton are too well known to need description here.

The cotton industry in Latin America is still in its infancy, but it is a well-nurtured, healthy infancy that promises a most energetic development and sturdy growth in the future.

SANTO DOMINGO MINE, PROVINCE OF CARABAYA, PERU.

This gold mine, situated in the Montaña district, on the eastern slope of the Andes, is the property of Pennsylvania capitalists.

Mexico, Brazil, and Peru now produce a very respectable proportion of the world's production of cotton.

In Peru the *Gossypium peruvianum*, that indigenous cotton plant already referred to, is being more and more extensively cultivated year after year; but in spite of increased outputs, the demand yearly exceeds the supply. The climatic conditions and soil of Peru offer the best hopes for the cotton planter, while an increasing home market insures the successful operation of cotton spinning plants. This feature of the industry is now receiving the careful consideration the cotton-goods trade in Latin America warrants; so the European and American exporter will soon find himself competing with the home market.

Cotton may be "King" again, and if so, his realm will be extended far in Latin America.

SILVER: Silver to the value of over seven thousand millions of dollars has been mined in Peru since its discovery. That is the record of the Western World—enough silver dollars to circle the earth nearly seven times, if the coins were laid edge to edge around the globe. Naturally, all this silver has not been used for coinage. The experts have figured that perhaps one-fifth of the total production has been consumed by the mints of various countries, but the absence of reliable data makes such estimation merely an approximation. However, North and South America have given the world the greatest share of silver.

Pure silver has a beautiful white color and luster. Like pure gold, it is very soft and almost as plastic as the more valuable metal. It will not tarnish under ordinary atmospheric conditions, but let the air be contaminated to the least degree with sulphuretted hydrogen, and silver exposed to it will quickly be covered with a black film. Like gold, it is malleable and ductile, and while harder than that metal, it is softer than copper. It can be rolled into sheets $\frac{1}{1000}$ of an inch thick, and silver foil can be beaten so thin as to admit light. With a specific gravity of about 10.46 it melts at 960° C., but needs 2,000° of heat to make it boil.

Silver is the best conductor of electricity we know and one of the best conductors of heat waves. Neither dryness nor moisture affects it at ordinary temperature, or even caustic alkalies or vegetable acids.

The word silver can readily be traced through various changes back to the Anglo-Saxon root scolfer, which signified the metal in the distinctive sense of money.

The distribution of this metal originally was coextensive with the earth's crust. It is even found in the composition of the ocean. However, the greatest deposits of silver have been discovered in that unique geologic formation throughout the western portion of North and South America, called the Rocky Mountains in the northern and the Cordilleras in the southern continent. The United States, Mexico, Peru, and Bolivia have been the greatest silver-producing countries of the world. The total annual output for all countries will average between 50 and 60 million ounces.

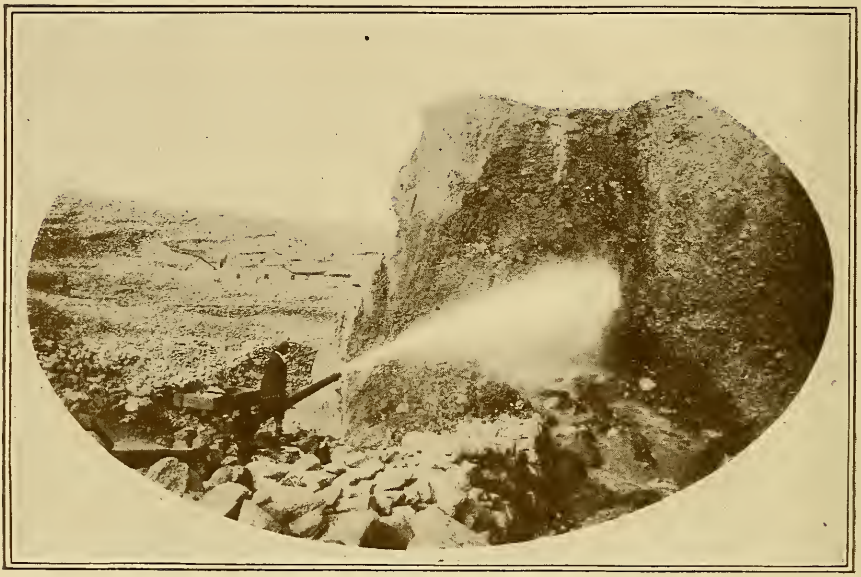
The famous Comstock lode mines in Nevada produced gold and silver equaling in value $320,000,000 between 1860 and 1890, of which about $150,000,000 can be charged up to the latter metal. The present production is unimportant. The largest single silver producer in the world to-day is the Broken Hill Proprietary Co., of New South Wales, Australia. In former times, when the Spaniards controlled the mineral output of the New World, the mines of Mexico and Bolivia poured a steady silver stream into the treasure chests of Spain. The mines of Guanajuato, Mexico, are judged to have produced one-sixth of the silver of the world, while those of Potosi, Bolivia, from 1545 to 1864, are estimated to have reached the enormous value of 3,631,000,000 pesos as their output.

Silver money circulated from the earliest times of which there is any historical record. Probably because it was one of the "noble" metals, the metals that do not rust, it was chosen as being most suitable to measure values. Coins of silver, with faint images, that date from early Roman times, are found in all museums of antiquities, and such records as we have of dawning history refer to this use of the metal. Biblical references are common, among which the price of the betrayal, 30 pieces of silver, first comes to mind.

In some ancient States the white metal appears to have had a higher value than the now more precious yellow. This would seem to have been the case in Arabia and ancient Germany.

As late as the seventeenth century the Japanese valued gold and silver equally. It is curious to note that gold coins were secondary in early minting. Going back to remote history, silver appears to have been everywhere at least equal in value to the rarer metal, until the silver mines showed signs of exhaustion, when, as the principal coins were of copper and silver, and it was the custom to express prices in these coins, a serious decrease of actual money was threatened. This was averted by the simple expedient of raising the legal value of gold coins. In Greece, at the time of Herodotus, the ratio had been put up to 13 to 1, which relieved the strain of tight money, and incidently provided a comfortable profit for the State. When the Romans, by their successful military expeditions into Gaul and Spain, had acquired a monopoly of the existent gold-mining industry, it naturally followed that they should make gold the basis of their coinage; then, when the gold supply began to run short, they reversed the process of the Greeks and raised the legal value of silver. The ratio was now 10 to 1. For a long period there were varying ratios throughout Europe and the Indo-Arabian States, silver being quoted at from 1 to 6, ranging down to 1 to 13 as compared with gold. Generally speaking, however, it may be said that the value of silver rose gradually and steadily until the discovery of America.

In that period of the world's development, when Spain and Portugal were competing for a monoply of the earth's surface, the Spanish throne put the ratio at 13⅓ to 1 when it had been about 10 to 1 before the voyage of Columbus. This was when gold was the principal New World export and silver had not been discovered. Portugal now began to control enormous quantities of the higher valued metal imported from Japan, the East Indies, and Brazil. When the Spanish imports of gold dwindled, the loss was offset by the Potosi silver production, but the Portuguese monarch, because he controlled the gold output, dealt his cousin of Spain a severe blow by establishing the now famous 16 to 1 silver standard. Since that time, except for a short period, this ratio has been maintained in Spanish and British America and the United States.



GOLD MINING AT POTO, PERU, 16,000 FEET ABOVE SEA LEVEL.

Free coinage was the custom in many countries, and this public minting for private use continued in the United States until 1873, some $8,000,000,000 having been coined since the foundation of the Republic.

Silver, like gold, is alloyed with copper in all coins. In England, the rate is 12⅓ parts silver to 1 of copper; in the United States and France, 9 parts to 1 part; and in Prussia, 3 to 1.

After coinage, silver finds its principal use in the arts, in jewelry and plate, in chemistry, and very largely in photography. In this latter application, silver chloride and bromide have brought about changes that make the taking of photographs a real art.

Mexico leads the world in amount and value of silver production. In 1910, 2,257,363 kilograms (2.2 pounds per kilogram) of the metal were mined during that year, and the total amount was valued at nearly $36,000,000. Among the other Latin-American countries, Peru and Bolivia, still produce certain quantities of the metal; the latter country yielding about three and a half million dollars worth of silver. With improved mining processes and slightly better general conditions, there can be little doubt but that the extraction of this noble metal would again approximate, in results, those of the great Spanish silver mining days in Bolivia.

COPPER: Copper is the metal of the future. The many mechanical and electrical inventions that have crowded the last half century literally eat copper, and day by day the consumption is increasing, thus tending to prove that we live in the morning of the second Bronze Age. The ultimate destiny of copper can not be prophesied. Mining, mechanical, electrical, hydraulic, gas, in fact technical engineering of all different distinctions finds its growth firmly rooted in the beds of this base metal. The amount consumed in telegraphy and telephony to-day gives some idea of the probable future consumption.

In view of the great industrial expansion which the world has witnessed since man made a bond slave of steam, it would be difficult to name the branches of the mechanical arts wherein copper does not find its place. Copper combined with tin was the first metallic compound known to man; for bronze, which is the technical name of this compound, has given its name to an archaeological epoch, and students have many metallic relics, such as domestic implements, arms, and ornaments, etc., which they can study to give them a hint as to the manners and customs of the people of that prehistoric age. Unfortunately the knowledge of the art of tempering copper, which was known to the ancients, has been lost, for it is a fact that this metal was cast, not only into shields and breastplates for the Roman soldiers, but into sharp-edged weapons and tools.

In America copper was used extensively by the aborigines, whether they were Indian, Aztec, Mayan, or Incan people. The National Museum of Mexico contains many specimens of both implements and utensils cast in the red metal, of remarkable design and workmanship.

The low Latin name for the metal was cuprium, which is a corruption of the words Cyprium Aes, meaning cyprian brass, a designation having its foundation in the fact that the Romans obtained a fine quality of copper from Cyprus. Our old English word copper is cognated to the Latin vocable.

Copper is a beautiful metal. Its brilliant red color distinguishes it from all others, and when polished it has such a light-reflecting quality that its sheen rivals the luster of gold. Analysis gives it atomic weight of 63.3, and specific gravity varying between 8.91 and 8.95. It is to a high degree malleable and ductile, and iron is the only metal which exceeds it in tenacity. It ranks second to silver as a conductor of electricity, and is much preferred to the latter metal in this use. It does not rust readily; however, it easily takes a superficial tarnish, which spoils its brilliancy unless removed.

The distribution of copper in nature is extraordinary. The metal is found in all soils and ferruginous mineral waters and ores. However, it is not only distributed throughout the earth's crust, but also traces of it are found in seaweed, certain mollusks (often being disagreeably apparent in oysters), in straw, hay, eggs, cheese, meat, in our own anatomy, and even in our blood.

While the United States is the leading copper-producing country of the world, still some of the Latin-American countries show unmistakable evidences of large deposits of this metal. Australasia, Africa, Bolivia, Canada, Chile, Cuba, Germany, Korea, Mexico, Norway, Peru, Russia, Spain, and Portugal, and even Japan, are all copper-producing countries.

The greatest mass of native copper found was discovered in the Lake Superior region in 1857. This copper nugget was 45 feet long, 22 feet at its widest point, had a maximum thickness of 8 feet, weighed about 420 tons, and was 90 per cent copper.

The uses of copper are myriad. In the arts there is an ever-increasing expansion of the demand for this metal.

To refer again to telegraphy, copper circuits are more and more in vogue, displacing iron of the earlier periods, and while it may be contended that telegraphy has almost reached the limit of its growth, there will always be a steady demand for copper in operating existing works. On the other hand, in telephony the employment of copper has increased to an almost unbelievable amount; $25,000,000 has been recently spent in improving telephone service in New York alone. Much of this money has gone into copper cables, wiring big switchboards, circuits in office buildings, hotels, etc.

The history of electricity is the history of copper. It serves in the construction of dynamos and motors, and great quantities are annually rolled into wire for submarine cable and transmission lines for light and power service. In fact, more and more copper is being employed in the construction of electrical apparatus, from the gigantic generator in the dynamo room up to the almost insignificant key of the switch that turns on the light or starts the motor whirling. Electrical railway work has obviously consumed enormous quantities of copper. Street-car lines of cities take annual toll in many tons of this red metal. The railways that have installed special electrical circuits point to another field wherein copper will be consumed in large quantities.

While the uses of copper are numerous and important, perhaps of even more importance is the service of the metal as an alloy of gold, silver, various brasses, bronze, and German silver. Copper is added to these soft metals in order to give them hardness. Thus we find it in the composition of gold that goes to make jewelry; in the composition of silver coins; in gun metal, bell metal, bronze, and aluminum bronze, and very extensively in all kinds of marine construction work. Tobin bronze, which contains a large percentage of copper, is a specific compound that goes to sheath the bottom of modern battleships.

Perhaps, the principal copper-mining works of South America to-day are those of Cerro de Pasco in Peru. This is the highest mine of its kind in the world. The shafts are at an altitude of about 14,000 feet. The difficulties which confronted the company that undertook to develop this property seemed at first almost unsurmountable. In overcoming these difficulties the highest railroad in the world has been built, an engineering achievement that in itself would stamp the men in charge of this work as being leaders in their profession; but in addition to this, tremendous smelters have been constructed, and all of the incidental work of making a modern mining plant has been carried out at an altitude which makes the slightest exertion laborious and painful until one has become accustomed to the conditions of the atmospheric pressure. Millions of dollars were put into the soil before one ton of copper was extracted. However, the mine is now entering upon a period of successful operation, for during the year 1910 it showed an increase of 37 per cent in the way of output over the previous year.

In Mexico the Cananea copper mines are well known, and in Chile the Braden Copper Co., which has a mine in the Province of O'Higgins, has been doing a profitable business for many years.

Again it may be said, as in the like industries of gold and silver mining, that the exploitation of copper in Latin-American countries needs only cheaper transportation in order to make this industry pay dividends on the capital invested therein.

RAILWAYS AND INTERIOR WATERWAYS.

The railways in operation in the Republic have an extent of 2,665 kilometers (1,656 miles), of which 2,040 kilometers (1,268 miles) are standard and 625 kilometers (328 miles) narrow gauge. In this mileage is included 45 kilometers (30 miles) of interurban electric lines, all standard gauge. There are also about 5,500 kilometers (3,418 miles) of lines being constructed and under survey.

The Peruvian railways are to a great extent owned by the Government, and some 1,800 kilometers (1,120 miles), or 65 per cent, of these lines are operated by the

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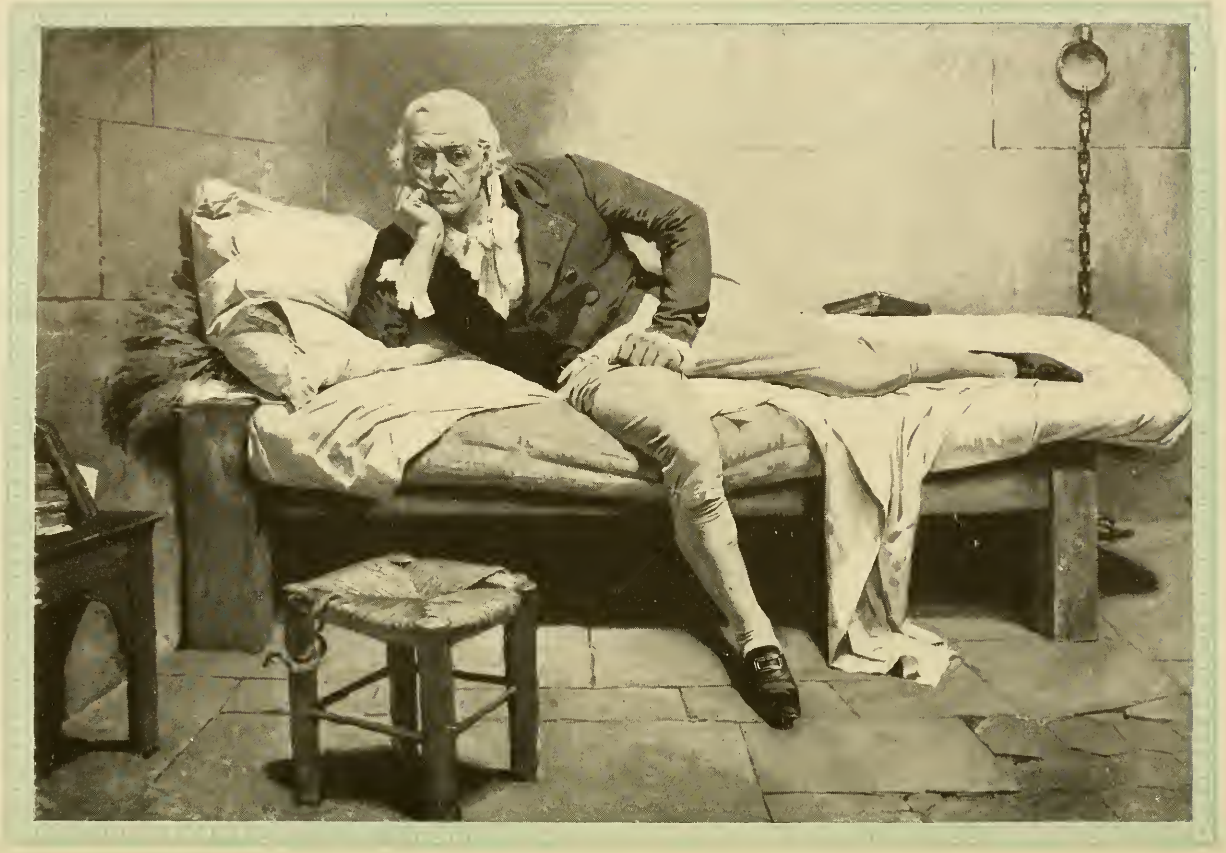
Budget bill for 1911-12—Legation accredited in Cuba—Agricultural commission—Uruguay at The Hague court--New national holiday—Proposed labor law—Government packing house—Architectural competition—Railroad notes.

Venezuela 664

Revision of national codes—Budget for 1911-12—Conversion of certain public debts—Navigation and colonization contract—Review of the centennial celebration—Important development in Venezuela—Cotton mill for Maracaibo.



"MIRANDA IN PRISON."

Reproduction of a famous painting by the Venezuelan artist, Arturo Michelena, representing the last days of Gen. Francisco de Miranda, the precursor of Venezuelan independence, in his prison cell at the "Carraca," in Seville, Spain. The painting is the property of the Venezuelan Government, and occupies a prominent position in the Art Gallery at Caracas.

BULLETIN
OF THE PAN AMERICAN UNION

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THE experiment of publishing the MONTHLY BULLETIN OF THE PAN AMERICAN UNION in separate sections, respectively, English, Spanish, Portuguese, and French, has been well received. While the BULLETIN appears smaller in consequence, the arrangement is much more practical and better suited to the varying language constituencies which it reaches. For instance, when the BULLETIN containing under one cover the Spanish, Portuguese, and French sections went to a person who read only French, the Spanish and Portuguese portions were no better than waste paper. It was of little use to send to the 18 Spanish speaking Republics the BULLETIN which contained Portuguese and French as well. Correspondingly, in Brazil there was little demand for the Spanish and French sections. The new arrangement permits of better attention being given to each language section and the publication of more special articles and a larger number of suitable illustrations. The bulk in paper of the BULLETIN in each case may be lessened, but the quality will be much improved.

IMPROVEMENT OF THE PAN AMERICAN UNION GROUNDS.

On September 5, the contract for the improvement of the grounds of the Pan American Union was awarded to Norcross Bros. & Co., of Worcester, Massachusetts, who constructed the handsome building for which this new beautification will provide a proper setting. It will be remembered that following the presentation to Mr. Andrew Carnegie of the Pan American medal in May, that distinguished and generous philanthropist gave $100,000 to complete the original plans for the environment of the structure which his first gift of $750,000 made possible. The architects of the building, Messrs. Albert Kelsey and Paul P. Cret, of Philadelphia, were asked to develop their plans, and then bids were advertised for executing the work. The lowest bidders were the firm given above, and they have already commenced work. In a later issue of the BULLETIN full descriptive details of these improvements will be published. When they are completed they should give the Pan

Photograph by Harris-Ewing.

HON. JOHN R. CARTER,

Envoy Extraordinary and Minister Plenipotentiary of the United States to the Argentine Republic.

American Union the most beautiful setting of any building in Washington. On the Seventeenth Street side, facing the White Lot, there will be a dignified approach from the street, made entirely of marble. The present driveway will have on one side a marble balustrade and on the other a low marble coping. Handsome lamps will stand on marble pedestals on either side of the central approach. The wide expanse of lawns on the B and C Street sides will be left practically intact, but in the rear of the building, reaching from the present terrace back to Eighteenth Street, there will be an elaborate garden development, with a sunken section in which will be a pool 80 feet long by 30 feet wide, having an ornamented fountain at one end. On each side of the pool the ground will slope up to a gravel pathway, which will be surrounded by a marble balustrade. Perhaps the most imposing feature of these improvements will be a noble structure, called the terminal feature or building, which will face toward the main Pan American Building and have its rear upon Eighteenth Street. This will be characterized by three graceful arches corresponding to the three on the front of the main building and opening in turn upon the court, which will be finished in decorative tile.

THE UNITED STATES MINISTER TO THE ARGENTINE REPUBLIC.

John Ridgley Carter, the newly accredited envoy extraordinary and minister plenipotentiary to the Argentine Republic, was born in Baltimore, Maryland, November 28, 1865. He received his academic training at Trinity College, graduating with the degree of master of arts in 1885, and then pursued some special studies in the University of Leipzig. Mr. Carter attended the Maryland University Law School, but was graduated from the Harvard Law School, after which he commenced practicing in his native city. In 1894 he relinquished the legal profession to enter the diplomatic service of the United States as private secretary to the ambassador extraordinary and minister plenipotentiary to Great Britain. After serving two years in this position he was appointed second secretary of the embassy at London. On March 10, 1905, he was made secretary of the embassy, which post he held until September 25, 1909, when he was elevated to the position of envoy extraordinary and minister plenipotentiary to Roumania and Servia and diplomatic agent in Bulgaria. In 1910 he was designated envoy extraordinary and minister plenipotentiary to Bulgaria in addition to Roumania and Servia, and these posts he occupied until his recent transfer to the Argentine Republic to succeed the retiring Minister Charles H. Sherrill.

THE DIRECTOR GENERAL'S OFFICIAL TRIP WEST.

The Director General returned about the 1st of September from a most interesting official trip to the Pacific coast. In addition to executing the mission imposed upon him by President Taft to represent the President at the ground-breaking ceremonies of the Panama-California Exposition at San Diego, California, July 19–22, and at the opening of the Astoria (Oregon) Centennial, August 11, the Director General was invited, in his capacity as the head of the Pan American Union, to be the guest of the civic and commercial organizations of the principal cities on the Pacific coast, and to address them on the subject of Pan American commerce and the Panama Canal. Among the invitations which he accepted were those tendered him by San Diego, Los Angeles, San Francisco, and Oakland, California; Portland and Astoria, Oregon; Tacoma, Seattle, Everett, and Spokane, Washington; Vancouver, in British Columbia, and Minneapolis, Minnesota. On account of pressure of time, he was obliged to decline similar hospitalities in a score of other cities, but everywhere he found a great increase of interest in the work of the Pan American Union, and in the development of closer trade relations with the Central and South American countries. He urged upon the business interests of the West the necessity of preparing for the Panama Canal, and recommended that they make their slogan from now on, "Get ready for the Panama Canal." The hospitality shown him and the attention given to his suggestions were most gratifying, and he takes advantage of this opportunity to express his thanks to the civic and commercial organizations, the State and city officials, and others who did so much to make his trip to the far West agreeable and successful.

ANNUAL REVIEW OF THE PAN AMERICAN UNION BULLETIN.

The special attention of the constituency of the MONTHLY BULLETIN is called not only to the July and August, or Annual Review numbers, but to the general survey of Pan American commerce, which will appear in the October issue of this publication. The information contained in these reviews and in this survey about the characteristics, conditions, and many phases of the export and import trade of the American Republics is of particular value to all persons who are interested in watching the commercial progress of the Western Hemisphere. If the work of the Pan American Union included nothing beyond the preparation of this review, it would justify its existence, if weight can be given to the opinion of numerous authorities and experts who have been good enough to comment upon the work of this institution. No government in the world, and no other organization, publishes so complete a statement of the trade of Latin America, and only those who are familiar with the preparation of this kind of data can realize the vast amount of work that is involved in its compilation. It is impossible to avoid some errors in a work of this nature, while the difficulties met in securing information which is both up to date and accurate are great and even discouraging. It is hoped, however, that the general good accomplished in publishing this material will far outweigh its minor shortcomings.

Photograph by Harris-Ewing.

HON. ARTHUR M. BEAUPRÉ,

Envoy Extraordinary and Minister Plenipotentiary of the United States to Cuba.

THE UNITED STATES MINISTER TO CUBA.

Arthur M. Beaupré, who succeeds John B. Jackson as envoy extraordinary and minister plenipotentiary to Cuba, is a native of the State of Illinois, where he was born in 1855. He was educated in the public schools of the city of Oswego, and entered the legal profession in Aurora, Illinois, becoming clerk of Kane County shortly afterwards. Mr. Beaupré entered the diplomatic service in 1897, after formal examination, as secretary of the legation and consul general at Guatemala, and served as chargé d'affaires from December 9, 1897, to January 24, 1898, and from February 12 to April 5, 1899. On October 27 of that year he was appointed secretary of the legation and consul general at Bogota, Colombia, where he also served as chargé d'affaires from September 23, 1900, to January 28, 1901, and from March 17 to July 22, 1902. On February 12, 1903, he was promoted to the post of envoy extraordinary and minister plenipotentiary to Colombia, and transferred to the Argentine Republic in 1904. After four years of service at this post Mr. Beaupré was accredited to the Netherlands and Luxemburg on April 2, 1908, which positions he was occupying at the time of his transfer to Habana, Cuba.

VISIT OF THE DIRECTOR GENERAL TO PANAMA.

At this writing the Director General is planning a visit to Panama in order to confer with Col. Goethals regarding the legislation, which it is desired that Congress should enact at the coming session, for the administration of the completed canal, and to renew his acquaintances and friendships among the men of the Republic of Panama with whom he had most agreeable relations as United States Minister in 1904–5. He is also greatly interested in the progress which is being made in the construction of this waterway, and is sure to be much impressed by the remarkable advance which has been made since his last visit there four years ago. The Director General is a great admirer of the administrative abilities of Col. Goethals and believes that the views and recommendations of the chairman and chief engineer of the Canal Commission should be followed by Congress in framing the legislation which should be passed in the near future, in order that there may be proper preparation for the opening and control of the canal. During Mr. Barrett's recent visit to the Pacific coast he continually emphasized before the civic and commercial organizations the necessity of their petitioning Congress to act upon this matter at the first possible opportunity.

SIXTH INTERNATIONAL DRY-FARMING CONGRESS.

On account of the growing interest in different parts of Latin America on the subject of dry farming, it seems fitting to make mention of the Sixth International Dry-Farming Congress and International Exposition of Dry-Farmed Products, which will be held in Colorado Springs, Colorado, October 16 to 20, 1911. A most elaborate program has been arranged and it is hoped that there will be many representatives present from foreign countries. All communications should be addressed to John T. Burns, executive secretary-treasurer, box 1098, Colorado Springs. The Pan American Union takes advantage of this opportunity to extend to Mr. Burns and the members of the committee in charge its best wishes for a successful meeting.

THE UNITED STATES MINISTER TO URUGUAY AND PARAGUAY.

Nicolay A. Grevstad, the newly accredited envoy extraordinary and minister plenipotentiary to Uruguay and Paraguay, was born in Norway in 1851. He received his early education in the schools of his native country, and was graduated from the University of Norway in 1874. He then entered the law department of that institution completing the required course in 1878. On leaving the university, Mr. Grevstad engaged in newspaper work, first in Norway and then, in 1883, in the United States. After four years of newspaper experience here, he became the leading editorial writer on the Minneapolis Tribune, and since 1892 has been editor of the Skandinaven, of Chicago, Illinois. Mr. Grevstad succeeds Minister Edwin V. Morgan, who has been transferred to the legation at Lisbon, Portugal.

THE PANAMA-PACIFIC INTERNATIONAL EXPOSITION.

One of the most interesting experiences of the Director General during his recent trip to the Pacific coast was his stay in San Francisco, California, and the meeting with the directorate of the Panama-Pacific International Exposition. In addition to being entertained at a beautiful dinner given by the chamber of commerce of that city, he was the special guest of the directors of the exposition at a luncheon in which was carefully discussed the question of foreign participation. From the impressions which he received and from the investigations which he made, the Director General has no hesitation in stating that all indications point to the Panama-Pacific International Exposition being the most comprehensive and successful undertaking of its kind which the world has ever known. The splendid public spirit, energy, and optimism of the leading men and the people in general of San Francisco, are in themselves sufficient guaranties that it will be carried through to a brilliant realization and that every effort possible will be exerted to extend genuine hospitality to foreign countries participating and to foreigners in attendance. Supplied with abundant funds, managed by able men, possessing an ideal location, and celebrating one of the greatest events in modern history, the opening of the Panama Canal, the Panama-Pacific International Exposition should appeal to foreign countries as well as to the United States, and it is to be hoped that every nation on the Western

Photograph by Harris-Ewing.

HON. NICOLAY A. GREVSTAD,

Envoy Extraordinary and Minister Plenipotentiary of the United States to Uruguay and Paraguay.

Hemisphere will be represented there by creditable buldings, comprehensive exhibits, and able commissioners. In a subsequent issue of the BULLETIN there will be a careful description of the plans and grounds of this vast undertaking.

THE UNITED STATES MINISTER TO COSTA RICA.

The appointment of Lewis Einstein as envoy extraordinary and minister plenipotentiary to Costa Rica marks another promotion in his diplomatic career. Mr. Einstein was born in New York City, March 15, 1877, and graduated from Columbia University in 1898, receiving a master of arts degree in 1899. He is the author of several historical books, articles, and reviews. Mr. Einstein entered the diplomatic service of the United States in 1903 as third secretary of the embassy at Paris, and on March 10, 1905, he was transferred to third secretary of the embassy at London, also serving during that year as secretary of the United States Commission at the Moroccan Conference. He was next appointed second secretary of the legation at Constantinople, and on June 28, 1906, when the legation was elevated to an embassy, he was designated as second secretary; two years later he was promoted to secretary of the embassy. This position he occupied until December 21, 1909, when he was transferred to secretary of the legation at Peking. Mr. Einstein was next promoted to his present post, minister to Costa Rica, to succeed the retiring Minister William Lawrence Merry.

THE ENGLISH REVIEW OF REVIEWS AND THE BULLETIN.

The Review of Reviews, of England, stands so high as a widely read and quoted magazine that there is much satisfaction in quoting the following from a letter recently written to the Pan American Union by the general manager of that publication, Mr. Edwin H. Stout. He says:

> You send us to this office every month a copy of the BULLETIN of your union, and I find it a very interesting publication, so much so that we have several times lately in the Review of Reviews drawn attention to its articles. One result of these notices in our magazine has been that we received various inquiries from our readers as to where this publication can be obtained.

THE INTERNATIONAL CUSTOMS TARIFFS BUREAU ON THE UNION'S WORK.

References have been made several times in the BULLETIN to the special pamphlets which the Pan American Union is issuing upon the tariff laws of the different countries. It is, therefore, gratifying to quote the following opinion expressed by Mr. William E. Sargeant, of the International Customs Tariffs Bureau, of Brussels:

> The Argentine Tariff Law which you have recently published is a novelty in its style, and I do not wonder it has met with such general approbation, as the form in which you have edited it affords a most practical and ready means of reference. It is bound to prove highly useful.

Photograph by Stark.

HON. LEWIS EINSTEIN,

Envoy Extraordinary and Minister Plenipotentiary of the United States to Costa Rica.

INSTRUCTIVE PAPER BY MR. D. H. GILMAN.

In connection with the propaganda of the Pan American Union to stimulate interest in the preparation for the opening of the Panama Canal, it is gratifying to read the article written by Mr. D. H. Gilman for the Railway and Marine News, of Seattle, Washington, entitled, "What Should We Do to be Prepared for the Opening of the Panama Canal?" Copies of this interesting article can be secured by persons who will address Mr. Gilman, care of the paper mentioned.

THE UNITED STATES MINISTER TO HONDURAS.

Charles Dunning White, the newly appointed envoy extraordinary and minister plenipotentiary to Honduras, succeeds Fenton R. McCreery at that post. Born in Ithaca, New York, November 5, 1868, he attended the public and private schools and graduated from Princeton University in 1891 with the degree of bachelor of arts. He then studied law for a time in New York, after which he pursued post-graduate studies at the Universities of Berlin and Jena. Mr. White devoted the next several years to literary work in Europe, and then entered the diplomatic service of the United States as secretary of the legation at Buenos Aires in 1904. He served three years at this post when he was transferred, also as secretary, to the legation at the Netherlands and Luxemburg. On December 21, 1909, he was again transferred to the legation at Christiania, and on March 31, 1910, he was named secretary of the legation at Habana, also serving as associate secretary to the secretary general of the North Atlantic Coast Fisheries Arbitration Tribunal at The Hague in 1910. From secretary of the legation to Cuba, Mr. White was promoted to his present post of minister to Honduras.

OPINION OF VICE CONSUL CHANDLER.

In the pamphlet published by the National Association of Manufacturers, describing the sixteenth annual convention held in New York, May 15, 16, 17, 1911, Mr. Charles Lyon Chandler, one of the representative and able consular officers of the Department of State of the United States, recently appointed vice and deputy consul at Callao, Peru, makes the following kind reference to the Pan American Union:

> The Pan American Union in Washington is a very beneficent thing. It is a great storehouse of knowledge and information, and it is practical information. Mr. Barrett recently remarked, and he said he had facts and letters to prove it, that in the last year they had been able to increase South American business $50,000,000 by giving people the information they required. Letters come into that bureau that are answered in two days, whereas it would take two months to write down to South America and get the information, and they might not have got it as well.

Photograph by Harris-Ewing.

HON. CHARLES D. WHITE,

Envoy Extraordinary and Minister Plenipotentiary of the United States to Honduras.

Peruvian Corp. (Ltd.), under arrangements made with that corporation after the Chilean war of 1879–1885. The Peruvian Corp. (Ltd.) also owns and operates a line of steamers on Lake Titicaca, the highest navigated body of water in the world, and by the purchase in 1910 of the Guaqui-La Paz Railroad in Bolivia it established a through route between Mollendo, on the Pacific coast, and the Bolivian capital, the amount of time required to make the trip between these two points being reduced to 48 hours, the first night of the journey being passed in Arequipa.

The Central Railway is the most important line in the country, running from Callao through Lima, the capital, to Oroya over 140 miles of track, with an extension from the latter point to Huancayo, 78 miles farther. The Cerro de Pasco Railway, owned by the mining company of the same name, runs from Oroya to Cerro de Pasco, the location of the largest copper mines in the world, situated at an altitude of 12,178 feet above sea level. The Central Railway is remarkable from the fact that on its short branch to Morocoaha the line reaches a height of 15,865 feet, the highest point of any railroad now in operation in the world.

Second in importance is the Southern Railway, extending from Mollendo to Puno, on Lake Titicaca, a distance of 324 miles, from which latter point it connects with a line of steamers running to the Bolivian port of Guaqui. From Juliaca, near the shore of the lake, a branch extends to Sicuani and Cuzco. On this line, at a distance of 172 kilometers (107 miles) from the coast, is situated the city of Arequipa, which stands at the foot of the far-famed mountain, El Misti. Near Arequipa also is located the Harvard Observatory, which was established at this particular point on account of the clearness of the atmosphere. Arequipa is 7,600 feet above sea level, and the line reaches its highest altitude of 14,666 feet at Crucero Alto, within a few hours' travel of that city. A remarkable fact in connection with the Southern as well as the Central Railways is that both lines arrive at their high altitudes without the assistance of the rack-rail system, which has generally been found necessary on similar railroads.

In addition to the two lines above mentioned the Peruvian Corporation also operates six other railroads in Peru, as follows: Paita to Piura Railway; the Trujillo Railway; the Pacasmayo & Guadalupe Railway; the Chimbote Railway; the Pisco to Ica Railway, and the Ilo to Moquegua Railway. These, as well as practically all the balance of the railroads in the Republic, run from the seaports to inland towns and each serve but a comparatively small portion of the coast territory.

The Chimbote Railway runs from the town of that name, located on the coast and having a fine natural harbor, as far as Tablones. An extension of this railway is under construction and at the close of 1910 had reached to kilometer 103; it is thought that the line will reach Recuay (kilometer 367) in three years. The longitudinal section of this line will no doubt form a part of the Pan American Railway when completed.

Considerable progress was made during the year 1910 on the various railroad projects, and a number of lines were thrown open to the public. The short railway from Iquitos to Moronacocha, a pleasure resort near the former city, was completed and the line opened to traffic in the early part of 1911. The line between Yonan and Chilete, in the Department of Cajamarca, was finished and put in operation in the latter part of 1910, while great progress was made on the railways from Chilete to Magdalena and from Lima to Huacho. The latter line is expected to be completed by January, 1912, and is of great importance to the welfare of the people of the metropolis, as it will enable the products of an exceedingly fertile district to be transported much more cheaply than at present. Material for the construction of the railway which is to run from Cuzco to Santa Ana, the capital of the Province of Convencion has arrived on the ground, and active work is expected to commence as soon as the starting point of the line is definitely decided upon.

Surveys have been contracted for by the Government for a continuation of the Central Railway's line from Huancayo to Ayacucho, with the ultimate intention of a further extension to continue on to Cuzco; total distance, including a branch to Huancavelica, of 260 kilometers (162 miles). This road will also, when completed, form in connection with the longitudinal portion of the Central and Southern Railways a part of the main line of the great Pan American system.

The Government has also kept in mind the importance of connecting the principal railroad lines with the numerous rivers in the eastern part of the Republic which form a part of the Amazon system of waterways, and thus not only divert to the ports of Peru a large part of the commerce which now goes by way of these rivers to the neighboring Republics, and foreign countries, but also provide a market in her own cities for the products of that section of the country which now are obliged to be transported by water through Bolivia and Brazil.

In line with this policy, a contract has been made for the construction of a railroad from Goyllarisquizga, on the Cerro de Pasco Railway, which is to run through Huanuco down the rich valley of the Huallaga River, to the port of Pucalpa on the Ucayali River, a total distance of 450 kilometers (280 miles). This line will provide an outlet to Peruvian markets for large quantities of rubber and timber, will bring into direct communication with the rest of the Republic the important Department of Loreto, which has hitherto been almost inaccessible, and will assist in developing great deposits of coal and other minerals, as well as provide facilities for the shipment of cotton, sugar, coffee, cocoa, and other products of the western coasts.

Arrangements have also been made with the Peruvian Corporation for the survey of a railroad to start at kilometer 67, near Tuapata, a station on the Southern Railway between Juliaca and Cuzco, and extend a distance of 357 kilometers (222 miles) to Chiforongo, on the Inambari River, from which point navigation is possible to the Madre de Dios River, one of the principal tributaries of the Amazon. The section which this railway will penetrate is exceedingly rich in mineral, forestal, and agricultural wealth, and its construction will place within easy rail and water communication one of the great rubber-producing regions of South America. Engineering parties entered the field in the early part of 1911, and it is hoped that the line will be completed within three years.

The preliminary survey has been made of another transandine railroad and a contract has been celebrated for the construction of the first portion of the line to unite the Pacific port of Paita, in the extreme northern part of the Republic, with a port on the Marañon River, the project including the building of two branches from the end of the main line at Baguachica, on the other side of that river, one to run in a northeastwardly direction to the port of Limon on the Marañon, and the other toward the east, terminating at Yurimaguas, on the Huallaga River. The route surveyed for the proposed railroad covers 700 kilometers (435 miles), and the approximate cost will be $5,000,000.

The department of public works has contracted with the Reparticion to Alpas Railway Co. to extend the line of the Supe-Barranca Railway to Alpas. This extension of 26 kilometers (16 miles) will connect the Alpas estate with the port of Supe, will afford more adequate facilities for transporting the increasing agricultural and stock-raising products of the fertile valleys of Barranca and Pativilca, and provide a convenient and cheap method of conveyance for the output of the rich mines of the Provinces of Cajatambo and Bolognesi in the Province of Ancachs.

Other projects which the Government has in hand are a railway from Port Lomas, on the coast between Chala and Quilca, to the Ferrobamba mines, situated in the Province of Cotabambas, Department of Apurimaco. This line also traversing the Provinces of Camana, La Union, and Antabamba, and will pass through regions where rich mines of gold, silver, copper, and coal exist; the construction of a new port in Matarani Bay, north of Islay, and of a short railroad line between the new port and Mollendo, connecting also with the Southern Railway at a point between Mollendo and Arequipa and reducing the distance from the coast to the latter city by 35 kilometers (22 miles); and a line to start from Oroya, on the Central Railway, descending through Tarma and La Merced to Puerto Werteman on the Perene River. A contract has been made

SCENE ON THE OROYA RAILROAD, CASAPALCA SMELTER IN THE DISTANCE.

This copper smelter overlooks the valley of the Rimac River, and is 95 miles from the coast, at an altitude of about 2½ miles above the sea. It was built for American capitalists by Capt. H. Geyer, an American mining engineer. The ore supply is obtained from the celebrated Casapalca and Cerro de Pasco mines, both of which are served by the Oroya Railroad.

with a German house for a preliminary survey of the last-named route, and active work in this direction was well on its way by the middle of 1911.

Aside from its long coast line and numerous bays and ports on the Pacific, Peru has been favored by nature with an extensive fluvial system, affording a convenient outlet for her products on the Atlantic side. It is estimated that there are from 3,000 to 4,000 miles of rivers in Peru navigable for vessels of from 8 to 20 feet draft. The port of Iquitos, on the upper Amazon, the principal inland port, can be reached in 26 days from New York by steamers sailing monthly. Other inland ports of some importance are Yurimaguas, on the Huallaga River; Contamana, on the Ucayali River; and Puerto Bermudez. On Lake Titicaca, Puno is the important port on the Peruvian side.

The majority of Peru's navigable rivers are on the east side of the Andes, the rivers flowing into the Pacific Ocean being of but little use as fluvial arteries; the Tumbez and the Chira are the only two that are navigable even for short distances.

The upper Amazon, or, as it is called in Peru, the Marañon, with its numerous tributaries, of which the principal ones are the Ucayali and the Huallaga, form the extensive river system of eastern Peru, the Amazon River being navigable in its entire length in Brazil and in Peru. A number of steamship companies maintain a regular service on the various affluents of the Amazon as far as the port of Mayro, but 325 miles distant from Lima.

Peru has a number of large and beautiful lakes, among which the largest is Lake Titicaca, on the boundary line between Peru and Bolivia, and the highest lake in the world navigated by steamers. In Peru proper are, among others, Lake Chinchay-Cono, 37 miles in length by 7 miles wide, situated at an altitude of 13,800 feet, and Lake Lauricocha, at 14,270 feet above the level of the sea, said to be the source of the Amazon River.

THE PRESS OF PERU.

The Jesuits introduced printing into Peru in 1582, and their first book was a catechism printed at Lima by Antonio Ricardo in 1584. It was thus the earliest country in South America to have a printing press, and the second in the New World, as it was preceded by Mexico by only 46 years. The University of San Marcos, the oldest in America, had been founded in 1551, and the presence of this ambitious institution gave an impetus to learning which continued for generations. Much of the work of the original press was the issuance of religious publications, but only 10 years after the little catechism of Ricardo, namely in 1594, a genuine news sheet was scattered broadcast to supply the popular demand for information regarding the capture of the English freebooter, Richard Hawkins, and his ship, *The Dainty*, off the Peruvian coast. After this, occasional news sheets began to come and continued with more or less regularity for the following 100 years. These forerunners of the modern newspaper appeared about once a month as small-quarto, single-fold, four-page papers, the news being given in the form of a diary made up from day to day. Births and deaths, and robberies, a play at the palace, disasters, fires, and raids by pirates, were the subject matter, while extras containing foreign news items were issued as soon as possible after the messengers carrying dispatches arrived in the capital. These "noticias" were revived in the year 1744, and a definite name was then given to one paper, the Gazeta de Lima, successive numbers being issued for 12 years. With minor changes of editor and publishers the Gazeta continued for some time longer, the last number appearing on July 31, 1767.

The Mercurio Peruano, the first volume of which began January 1, 1791, was a fresh attempt to give news, gathered and printed at home, and was issued as frequently as eight times a month. This became, however, a literary publication, and gave great impetus to authorship on such subjects as history, science, and art.

It maintained its existence for several years and saw the birth of the earliest struggles for liberty in South America.

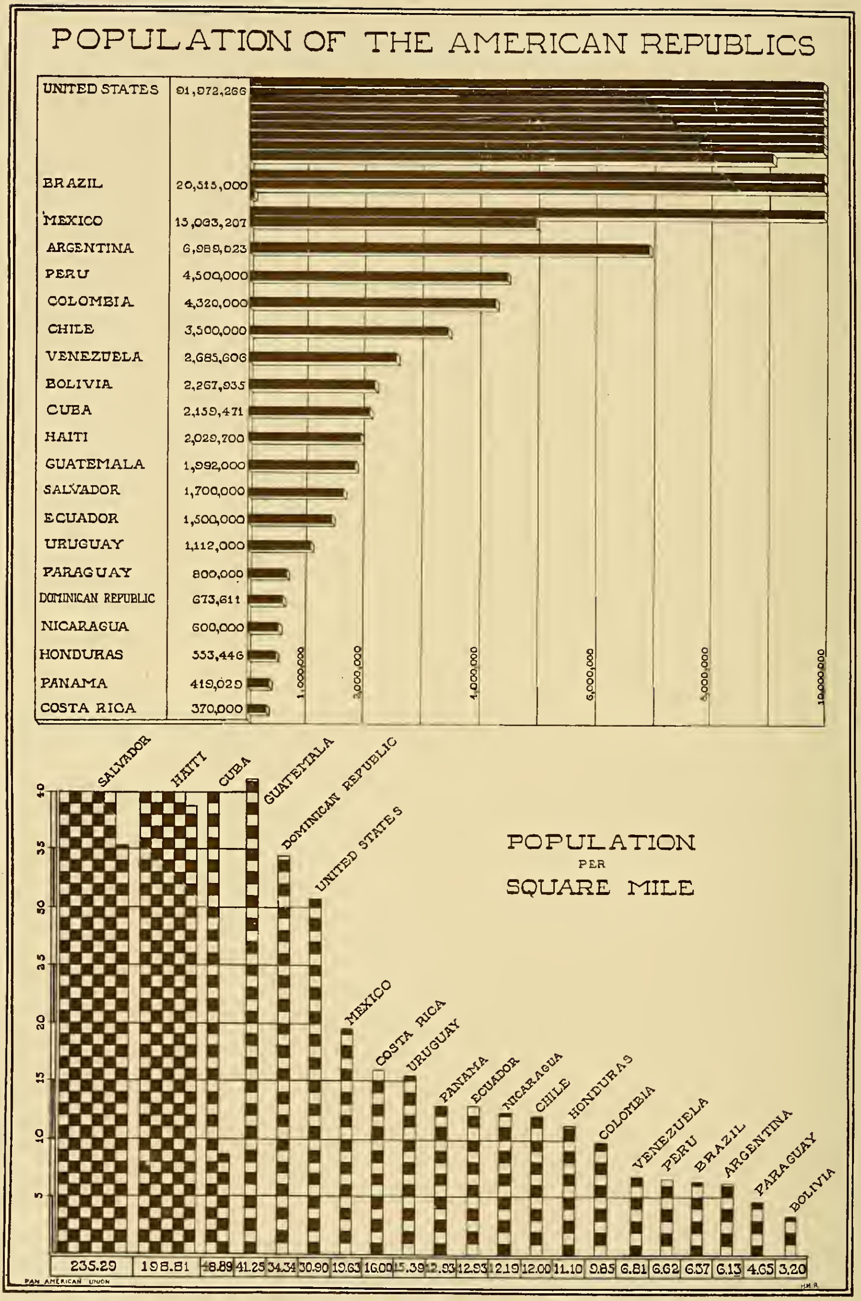
From the date of Peru's declaration of independence, in 1821, up to the latter part of the century, the times were those of readjustment and construction. The various organs of publicity were largely political and showed a lamentable instability of existence. They sprang into being at the triumph of a political cause and disappeared when the ruling party lost its power. But during the later years of the Republic, when there has been peace and political passions have calmed, all classes of publications have begun to devote more space to economic questions, to social matters, and to scientific discussions, so that those which now appear at frequent intervals have become newspapers in the modern sense of the word. Of the many publications born during the first half of the nineteenth century, only one, El Comercio, founded in Lima, May 4, 1839, survives.

The press of to-day in Peru has grasped the spirit of the twentieth century, and is in all respects modern and newsy; the equipment also is of the latest pattern. The number of dailies, weeklies, and less frequently appearing periodical publications in the whole country is about 200. Lima, being the capital of the Republic, shows the greatest activity, but that city by no means represents the entire intellectual vigor in this regard. Peru is a mountainous region with some portions separated from others by great distances and having local interests independent from the rest; therefore the newspapers of each section are of strong and steady influence in their own centers. Thus it comes that cities like Cuzco, Mollendo, Arequipa, Trujillo, Cerro de Pasco, Piura, and even Callao, have developed important and widely circulated dailies, while far-off Iquitos, the Peruvian metropolis of the east, has two papers filled with interesting news and other items of vital necessity to the community. This condition must be borne in mind by those who are studying the press of Peru, either as a source of information on the country's progress or as an agent to spread before the people popular facts by advertisement.

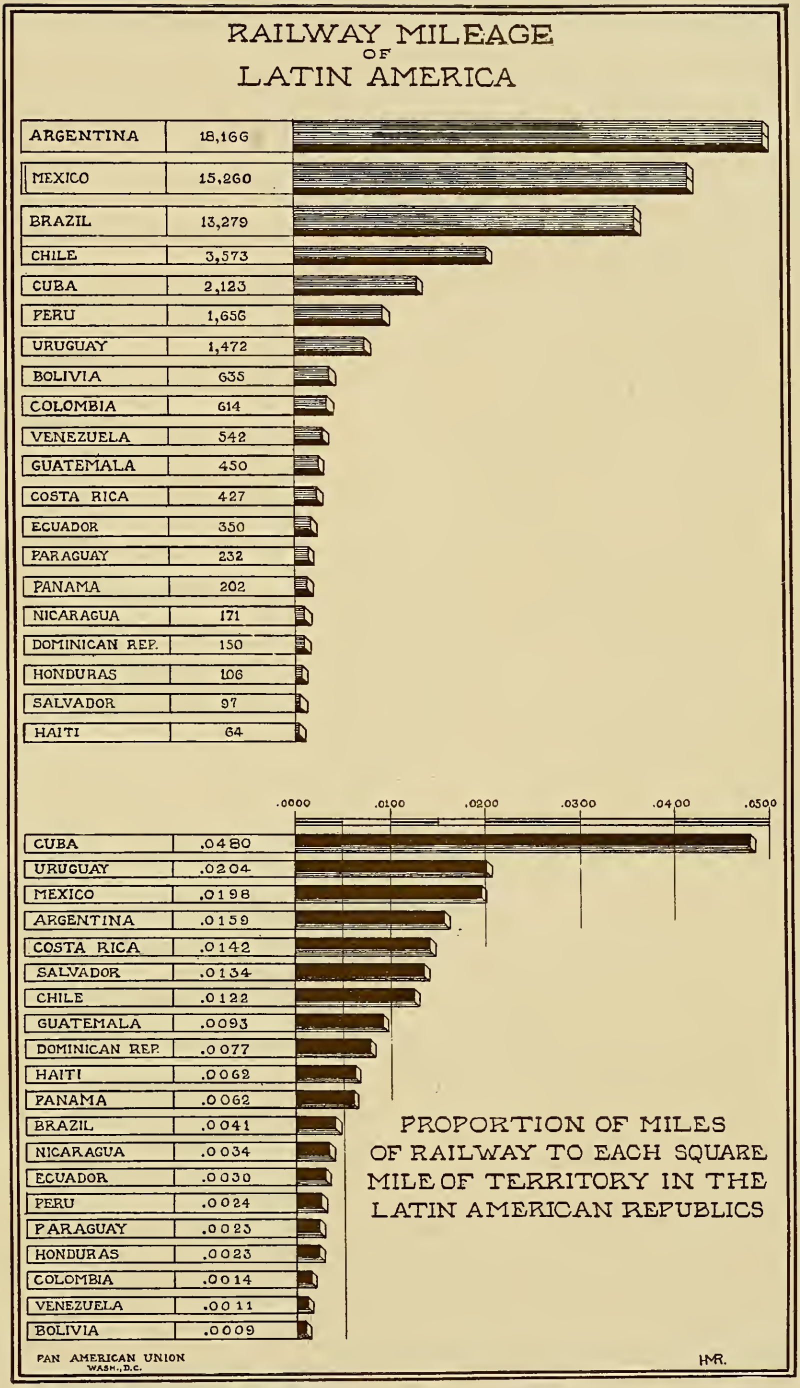
In size the usual daily newspaper in Peru is about 18 by 24 inches, of four, six, or eight pages, according to the amount of news. Each page has six and in a few instances seven columns. The first page is devoted entirely to reading matter, and here are found the cable messages, the review of the day, occasionally official announcements, and quite commonly those articles which in papers of the United States are called editorials. Advertisements are rarely placed on the first page, but as a rule they occupy the last page to the exclusion of everything else except a short chapter from some continued story at the bottom. The inside pages contain both reading matter and advertisements. Illustrations and even cartoons are gradually becoming features of the first page or even of the reading matter in general, while the advertisements, usually in heavy, clear type, are only beginning to make use of that special feature of the modern newspaper. The print in all cases is excellent.

The illustrated weekly and monthly papers of Peru deserve particular notice, because in general make-up, reading matter, illustrations, and advertisements they convey the impression of being amongst the most alert and ambitious of this portion of the press in Latin America. In size they correspond either to the large weeklies of Europe or the United States, or to what are in English called reviews or magazines. To indulge in an expressive if somewhat slangy word current in Anglo-Saxon countries, they are decidedly "classy." Among them are two periodicals published in English, the one in Lima, the other in Cerro de Pazco, and they are very creditable newspapers indeed.

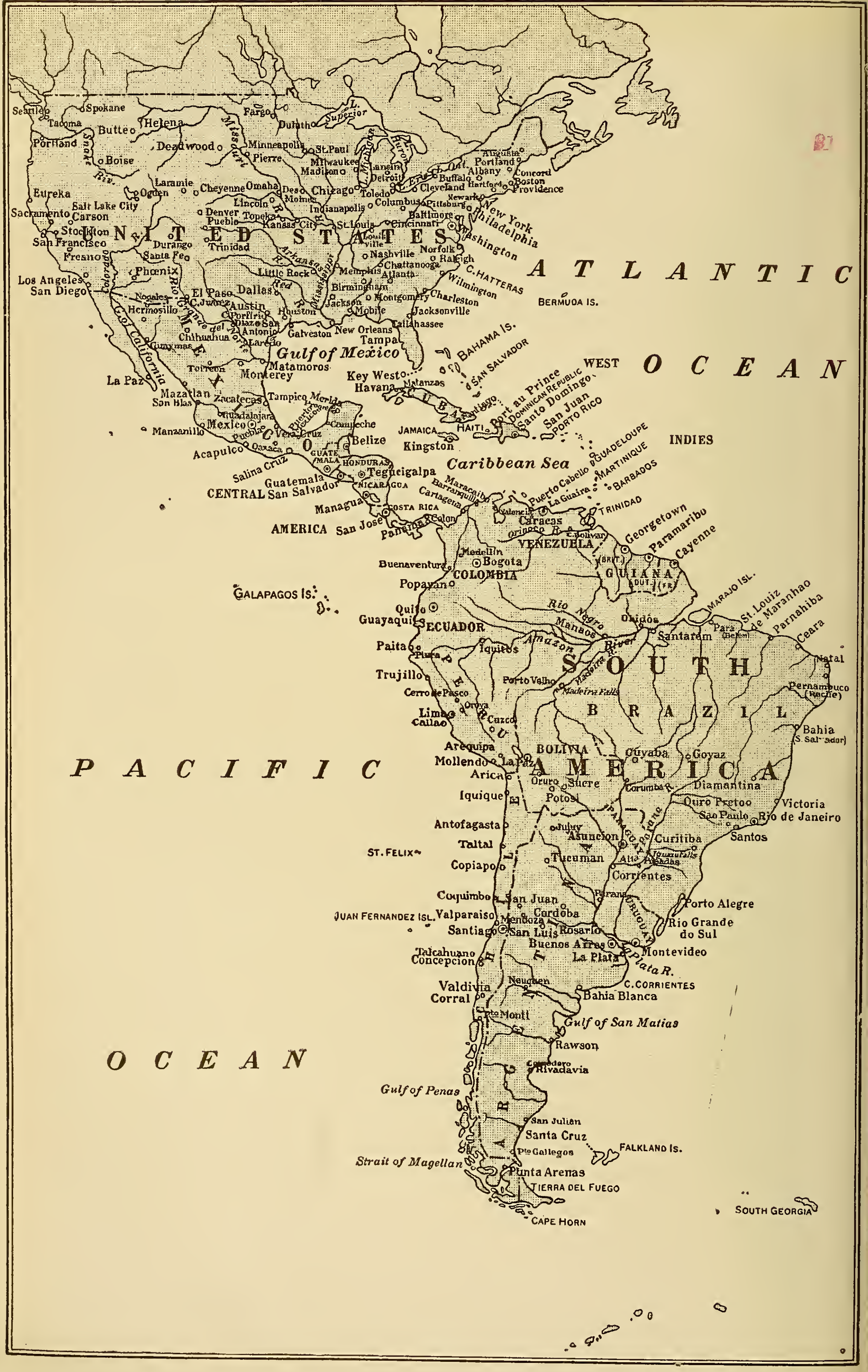
The circulation of all papers in Peru is large. A few of the local sheets, or those devoted to but one purpose, do not claim much above 1,500, but others, and especially the metropolitan dailies, distribute from 10,000 to 25,000, and on days of excitement even more. Advertising rates, therefore, vary considerably in accordance with the circulation. The column inch is the common unit of space, and for this the first insertion may be as low as 15 cents (gold); in those papers with extensive circulation a higher price rules, but in all cases satisfactory reductions are granted for repeated insertions and the occupation of greater space.



POPULATION OF THE AMERICAN REPUBLICS


RAILWAY MILEAGE OF LATIN AMERICA

PROPORTION OF MILES OF RAILWAY TO EACH SQUARE MILE OF TERRITORY IN THE LATIN AMERICAN REPUBLICS

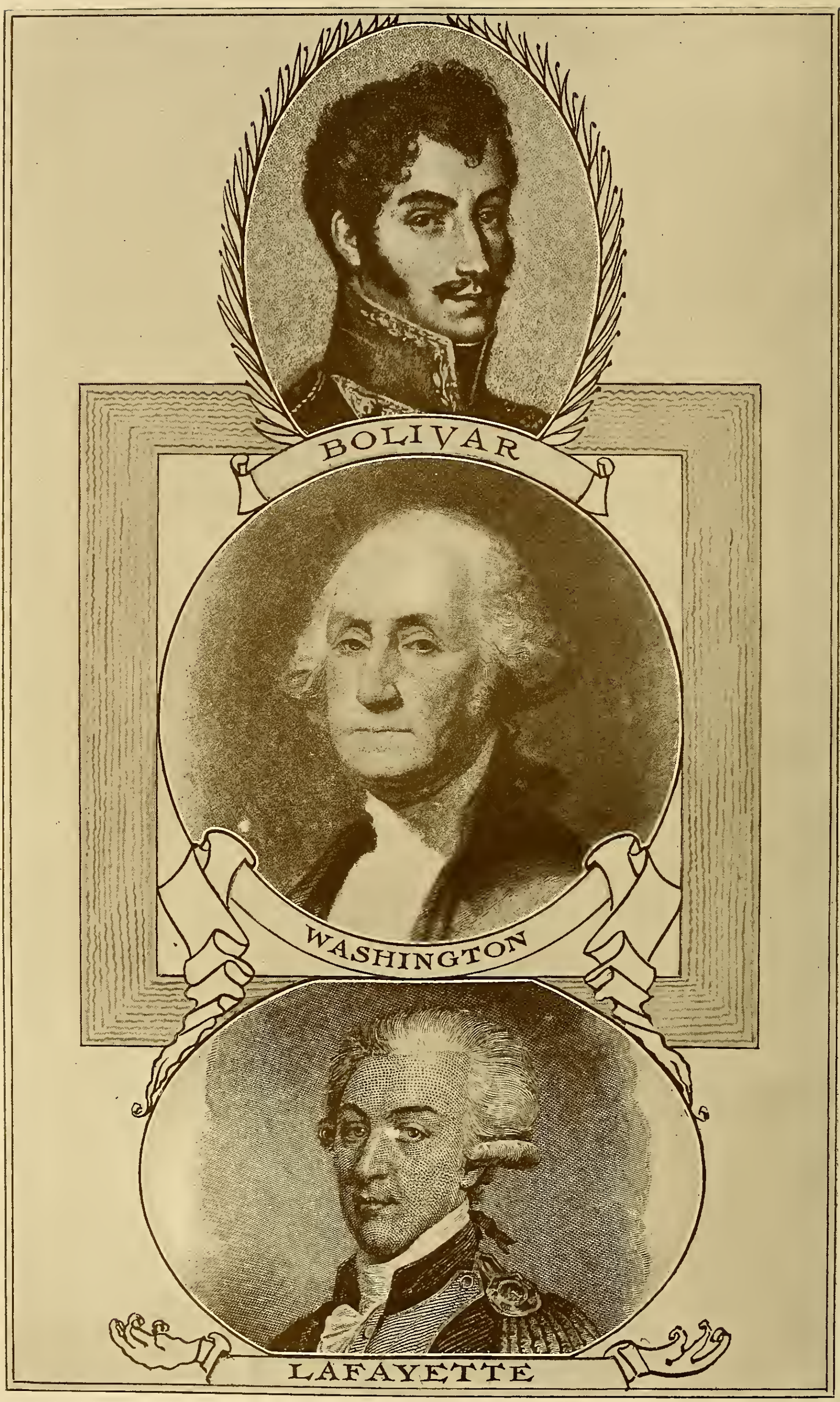

L. Superior
Seattle
Spokane
Tacoma
Butte
Helena
Fargo
Duluth
Portland
Snake Riv.
Boise
Deadwood
Missouri
Minneapolis
St. Paul
Pierre
Milwaukee
Madison
L. Michigan
Huron
Lansing
Detroit
Augusta
Portland
Concord
Albany
Boston
Providence
Hartford
Ont.
Erie
Buffalo
Cleveland
Toledo
Laramie
Ogden
Cheyenne
Omaha
Des Moines
Chicago
Eureka
Salt Lake City
Carson
Sacramento
Lincoln
Denver
Pueblo
Topeka
Kansas City
Indianapolis
Columbus
Pittsburg
Newark
New York
Philadelphia
Baltimore
Washington
Stockton
San Francisco
UNITED STATES
Durango
Trinidad
St. Louis
Cincinnati
Louisville
Norfolk
Raleigh
Fresno
Santa Fe
Arkansas R.
Nashville
Chattanooga
Atlanta
Colorado
Phoenix
Rio Grande
Little Rock
Red R.
Mississippi
Memphis
Birmingham
Wilmington
C. HATTERAS
ATLANTIC
Los Angeles
San Diego
El Paso
C. Juarez
Dallas
Montgomery
Charleston
BERMUDA IS.
Nogales
Hermosillo
Austin
Porfirio Diaz
San Antonio
Houston
Jackson
Mobile
Jacksonville
Rio Grande del Norte
Chihuahua
Galveston
New Orleans
Tallahassee
G. of California
Guaymas
Laredo
Tampa
BAHAMA IS.
SAN SALVADOR
Gulf of Mexico
WEST
OCEAN
Torreon
Monterey
Matamoros
Key West
Havana
Matanzas
La Paz
MEXICO
Mazatlan
San Blas
Zacatecas
Tampico
Merida
Progreso
Puerto Mexico
CUBA
Santiago
Port au Prince
DOMINICAN REPUBLIC
Santo Domingo
San Juan
PORTO RICO
Guadalajara
Mexico
Puebla
Vera Cruz
Campeche
HAITI
Manzanillo
JAMAICA
Kingston
INDIES
Acapulco
Oaxaca
Belize
GUATEMALA
HONDURAS
Caribbean Sea
GUADELOUPE
MARTINIQUE
BARBADOS
Salina Cruz
Guatemala
Tegucigalpa
CENTRAL
San Salvador
NICARAGUA
Maracaibo
Barranquilla
Cartagena
Puerto Cabello
La Guaira
TRINIDAD
Managua
COSTA RICA
Valencia
Caracas
AMERICA
San Jose
Panama
Colon
Orinoco R.
C. Bolivar
Georgetown
Paramaribo
Cayenne
VENEZUELA
Medellin
Bogota
(BRIT.)
GUIANA
DUT.
(FR.)
Buenaventura
COLOMBIA
MARAJO ISL.
St. Louiz de Maranhao
Parnahiba
GALAPAGOS IS.
Popayan
Rio Negro
Obidos
Para (Belem)
Ceara
Quito
Guayaquil
ECUADOR
Manaos
Santarem
Amazon
River
Paita
Piura
Iquitos
Madeira R.
SOUTH
Natal
Trujillo
PERU
Porto Velho
Madeira Falls
Pernambuco (Recife)
Cerro de Pasco
Oroya
BRAZIL
Lima
Callao
Cuzco
Bahia (S. Salvador)
Arequipa
BOLIVIA
Cuyaba
Goyaz
PACIFIC
Mollendo
La Paz
AMERICA
Arica
Oruro
Sucre
Corumba
Diamantina
Potosi
Iquique
Ouro Preto
Victoria
Sao Paulo
Rio de Janeiro
Antofagasta
Jujuy
PARAGUAY
Parana
Asuncion
Curitiba
Santos
Taltal
CHILE
ST. FELIX
Tucuman
Alta Posadas
Iguassu Falls
Copiapo
Corrientes
ARGENTINA
Coquimbo
San Juan
Parana
URUGUAY
Porto Alegre
JUAN FERNANDEZ ISL.
Valparaiso
Cordoba
Rio Grande do Sul
Santiago
Mendoza
San Luis
Rosario
Buenos Aires
Montevideo
Talcahuano
Concepcion
La Plata
Plata R.
C. CORRIENTES
Neuquen
Valdivia
Corral
Bahia Blanca
Pto Montt
Gulf of San Matias
Rawson
OCEAN
Comodoro Rivadavia
Gulf of Penas
San Julian
Santa Cruz
FALKLAND IS.
Pto Gallegos
Strait of Magellan
Punta Arenas
TIERRA DEL FUEGO
SOUTH GEORGIA
CAPE HORN

VENEZUELA'S CENTENARY CELEBRATION

VENEZUELA is the fatherland—the patria—of Bolivar. This fact must never be forgotten. Indeed, it could not be forgotten, and in 1911 it received noticeable emphasis, as the year marks the one-hundredth anniversary of the declaration of Venezuela's independence, in which Bolivar played such an essentially important part.

Bolivar had been called the Washington of South America by such a good friend of the Latin Republics as Henry Clay. Lafayette, in 1825, was the bearer of a medal of Washington, a gift of the family to the Liberator, and this he always wore on his breast. On the beautiful statue of Bolivar in Lima, the first to be erected on the Andes (1846), the only medal to appear was this portrait of Washington, and since that date all statues and busts of Bolivar bear the effigy of his northern prototype. While Bolivar, therefore, is one of the heroes of mankind in the struggle for liberty, he belongs to Venezuela; his name stands first in their National Pantheon. Through his struggles the nation was developed. Consequently, in celebrating their 100 years of independence, the nation honored Bolivar as well.

How the Venezuelans celebrated their centennial is well worth recording. There was a happy combination of reverence and devotion to the past, of substantial acknowledgment of the accomplishment of the present, and of foundations for both intellectual and material activity in the future. The official program covered the days between June 24 and July 24, with July 5 as the central date, the middle of the semana magna—the great week—in which the old century drew to a close and gave way to the new one. Those who know Caracas, the capital of the Republic, and have once realized the beauty and charm of the city in the valley; those who also have experienced the delightful and unrestricted hospitality of the people, and know how they have retained the inherited Castilian politeness and added to it a sprightliness born on the Western Hemisphere, will understand how attractive that celebration must have been. The formal program prepared by the Government for the people of Venezuela was delightfully supplemented by many social functions in which all could participate. The dedication of public buildings, the solemn processions along the streets and avenues, the exercises in park and pantheon commemorative of national heroes and events,



BOLÍVAR, WASHINGTON, LAFAYETTE.

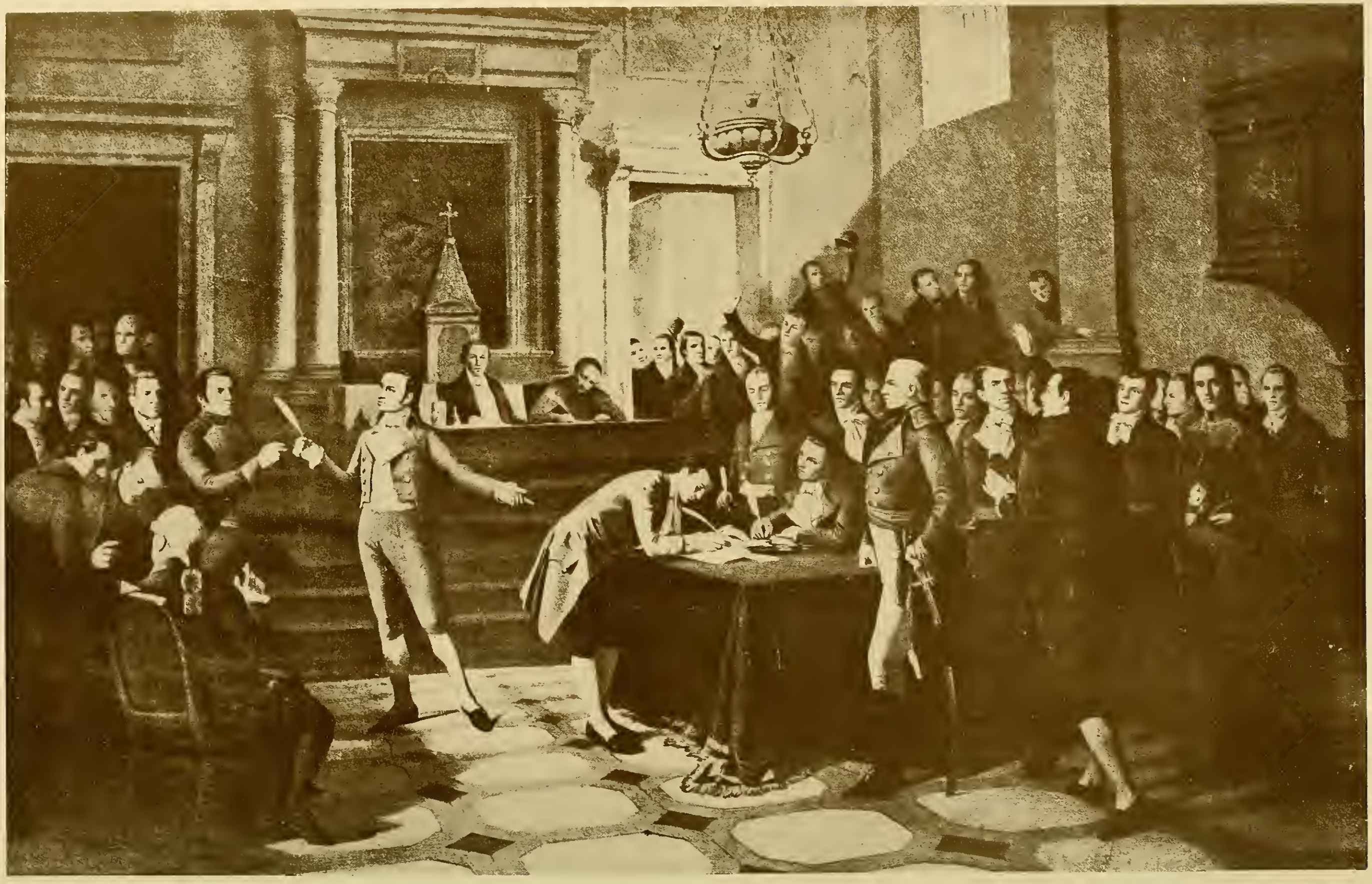
Bolívar is the national hero of Venezuela, and his memory is revered throughout the Republic. Washington is held in similar regard, because of his part in the American Revolution and of the strong attachment between him and Bolívar. Lafayette was devoted to both of them. By his aid the family of Washington presented to Bolívar a medal of Washington given to him by the American people, and a medallion containing his portrait and a lock of his hair. These treasures were worn by Bolívar until his death, but they now belong to the Government of Venezuela.

and the gala performances in the theaters, in open squares, and in clubs or private houses, all these were national in character, but, attended as they were by special ambassadors and other visitors from abroad, they became as a reality quite international in effect.

BOLÍVAR.

Marble bust of Simón Bolívar, presented by the Venezuelan Government to the Pan American Union, and which occupies a position in the Gallery of the Patriots.

The list of ambassadors, special representatives, and those officially connected with them, is a long one. Many of these had ladies with them and were accompanied by associates, secretaries, and attachés.



SIGNING THE DECLARATION OF INDEPENDENCE OF VENEZUELA IN CARACAS, JULY 5, 1811.

This painting is in the Salon Municipal of the Governor's Palace in Caracas, and looks down upon the very spot in which the signing of the Declaration of Independence took place, July 5, 1811. The central figures are the person writing his name to the document, Dr. Francisco Xavier Yánes; the one back of him and at the left, Don Francisco Xavier Uztatiz, handing a pen to the Marques del Toro, and the soldier standing at the side of the table and at the right, General Miranda. The picture was painted in Paris in 1883 by the Venezuelan artist Martin Tovar y Tovar.

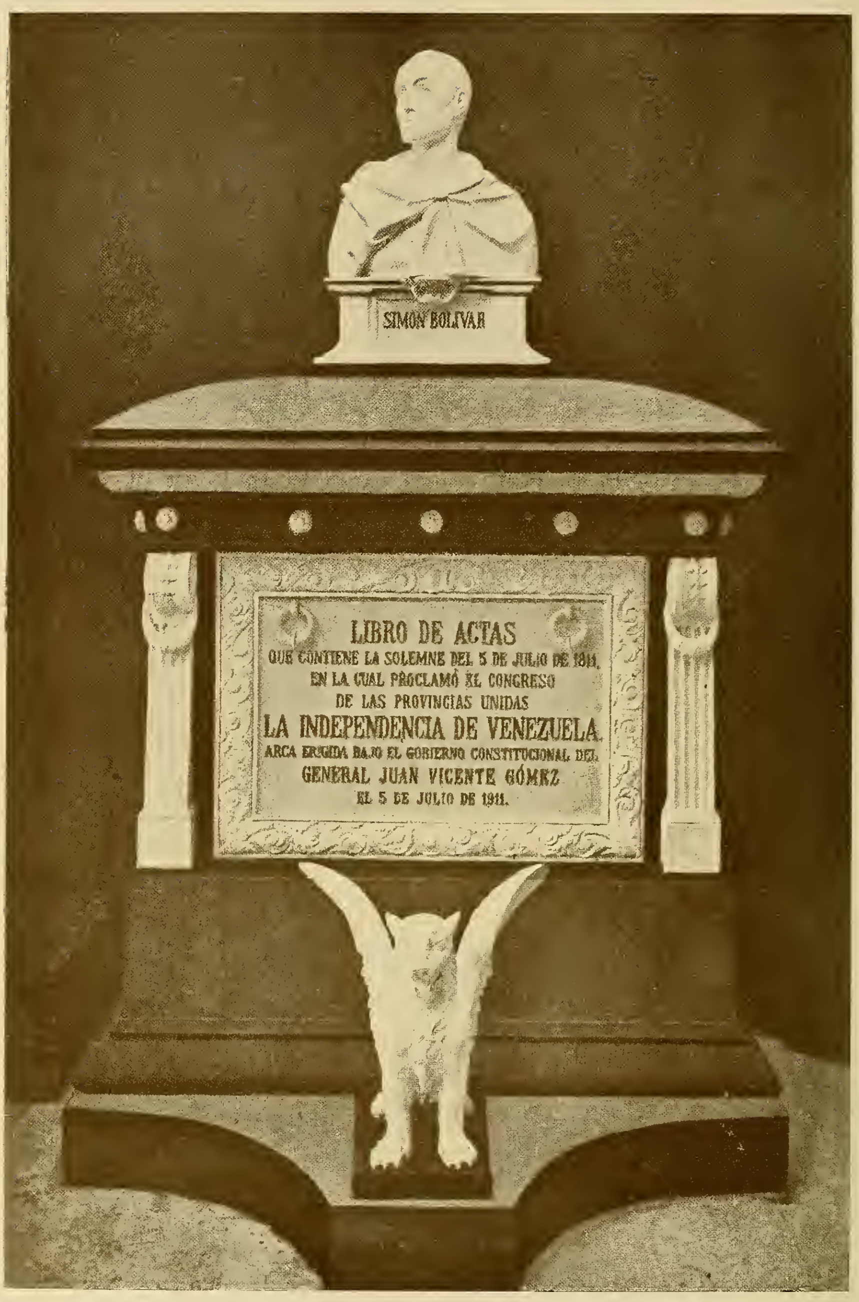
The chiefs of missions were: from Colombia, Señor General Ramon González Valencia; from Spain, Señor Don Aníbal Morillo y Pérez, Marques de la Puerta and Conde de Cartagena; from Bolivia, Señor Doctor Alberto Gutiérrez; from Ecuador, Señor Doctor José Peralta; from Peru, Señor Doctor Melitón Porras; from the United States, Mr. Thomas C. Dawson; from Belgium, Mons. Leon Vincart; from Chile, Señor Doctor Francisco J. Herboso, Gen. Vicente del Solar, and Admiral Joaquin Muñoz Hurtado; from Haiti, Mons. Lucas Pierre Louis, and Mons. Felix Magloire; from Brazil, Senhor Luiz R. de Lorena Ferreira; from Germany, Herr A. von Prollius; from Italy, Signor Carlo Filippo Serra; from Argentina, Señor Doctor Rómulo S. Naón; from Cuba, Señor Don Guillermo Patterson; and from Mexico, Señor Jorge Therry.

Also as special guests of the nation there were in attendance representatives at the Bolivian Congress, the delegates being, from Bolivia, Srs. Ismael Vázquez and Rodolfo Soria Galbarro; from Colombia Dr. Carlos Arturo Torres and Dr. José Borda; from Ecuador Gen. Julio Andrade and Dr. N. Clemente Ponce; from Peru Dr. V. M. Maurtua and Dr. Hernán Velarde; from Venezuela Gen. J. A. Velutini, Gen. Lino Duarte Level, Gen. F. Tosta García, Dr. J. L. Andara, and Dr. Alberto Smith.

HENRY CLAY.

He was always a friend to Latin America, and through his influences Venezuela was soon recognized by the United States as an independent nation.

All these officials and those intimately connected with them were the guests of the nation, and as such they had placed at their disposal suitable accommodations in private mansions or hotels. Including the ladies, secretaries, and attachés, the number reached approximately a total of 50, and made a brilliant addition to the concourse which, officially or unofficially, took part in the various ceremonies. In this connection it is interesting to note that, after satisfactory negotiation on the part of the Government, the splendid residence


SIMON BOLIVAR
LIBRO DE ACTAS
QUE CONTIENE LA SOLEMNE DEL 5 DE JULIO DE 1811,
EN LA CUAL PROCLAMÓ EL CONGRESO
DE LAS PROVINCIAS UNIDAS
LA INDEPENDENCIA DE VENEZUELA.
ARCA ERIGIDA BAJO EL GOBIERNO CONSTITUCIONAL DEL
GENERAL JUAN VICENTE GÓMEZ
EL 5 DE JULIO DE 1911.

ELABORATELY CARVED CHEST CONTAINING THE MINUTES OF THE PROCEEDINGS OF THE CONGRESS OF 1811.

One of the most impressive events during the centennial exercises of Venezuela occurred on July 5, 1911, when there were deposited in a chest especially constructed for that purpose the minutes of the proceedings of the Congress of 1811. The key to the chest was then delivered for safe-keeping to the President of the Republic.

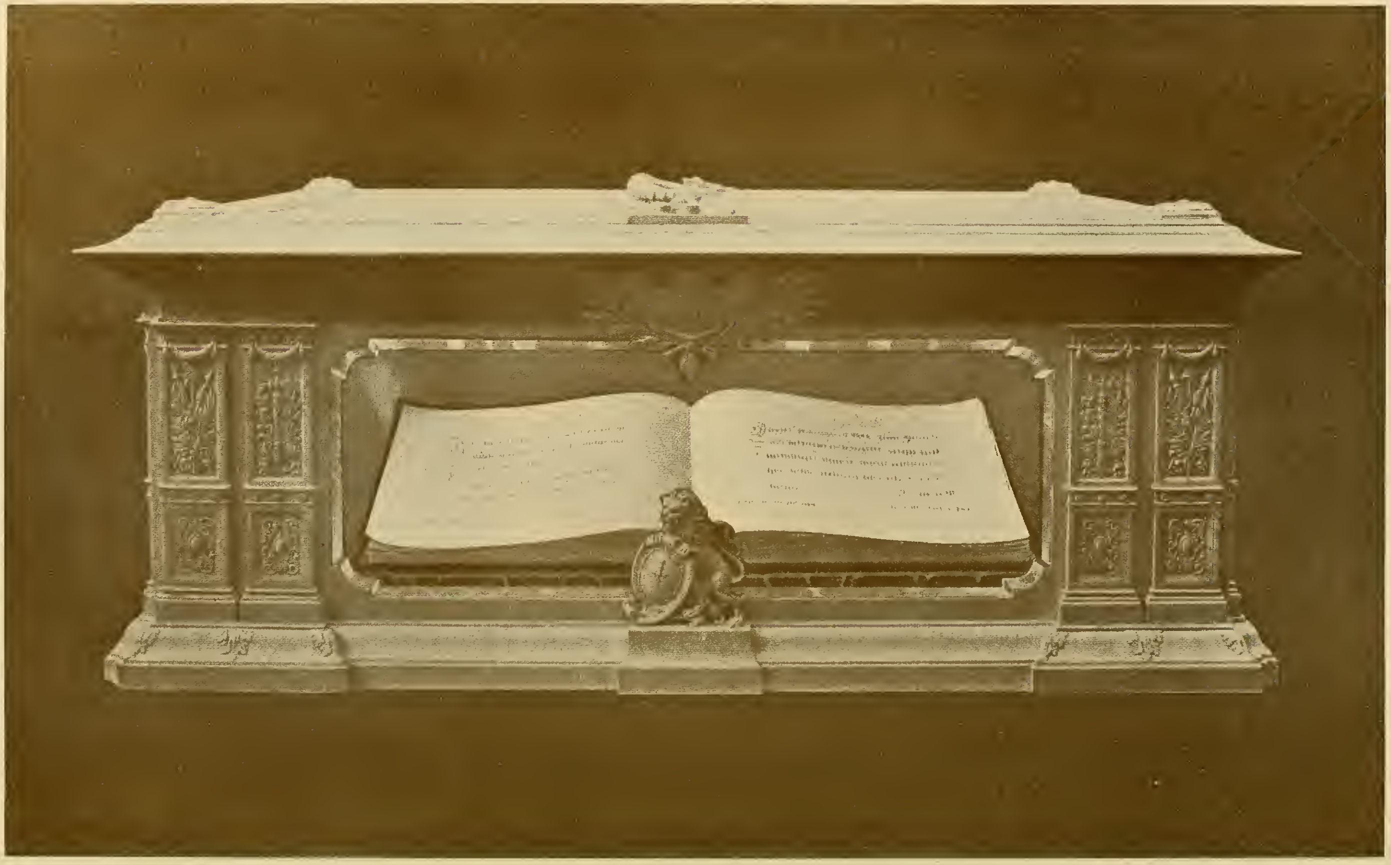
known as Miraflores was formally purchased by it, and on July 4, 1911. was recognized as the official mansion reserved for the President of the Republic. The building itself is one of the handsomest in Caracas, with spacious rooms, a fine patio, large apartments for public use and for offices of those in direct touch with the nation's Chief Executive, and it occupies a commanding position almost in the center of the city on an elevation overlooking the beautiful valley in which the capital lies.

The first formal act of the celebration was the inauguration of the Bolívar Memorial Museum, in Caracas, June 24, at 10 o'clock in the morning. This was the anniversary of the Battle of Carabobo, where Bolívar, Páez, Cedeño, and Plaza won the final victory (in 1821) which decided the independence of Venezuela. The museum is a nation's tribute to Bolívar and to the heroes surrounding him in the struggle for liberty. The ceremony was a solemn one, at which President Gómez, followed by the special foreign representatives and the officials of the Government, took part. The president of the organized commission in charge of the museum delivered the keys of the institution to the minister of public instruction. Speeches were made, congratulations were extended by all for the completeness of the collections, and the museum then became national property and the gathering melted away to attend the next exercises on the program.

But the influences of Bolívar and the mute relics of his life and of his associates must not be passed over with these few words about the formal opening of the museum. This contained, for example, his uniform, articles of personal clothing, the sword presented to him by Peru in 1825, medals and decorations granted him, the font in which he was baptized, with other mementos of his personal and private life. Yet more than that, the museum gave inspiration to thoughts of the hero himself and what he accomplished for Venezuela, as well as of many worthy patriots who had been his comrades and coadjutors in the campaigns 100 years ago.

In fact, the next official act, after the President and others had crossed the city and arrived in the Park of Carabobo, was the unveiling of the statues erected to the honor of four of the revolutionary martyrs—Manuel Cedeño, Ambrosio Plaza, Rafael Ferriar, and Pedro Camejo—and heroes of the decisive battle of Carabobo, for which the park had been named.

The sight was impressive, combining with the mournful purpose that was necessarily the note of the hour, a strain of exhilaration and hopefulness as well, because while being a recognition of the dead it was also an inspiration to the living, and should be taken as a mark of patriotism for future generations. Each statue was decorated by the national colors, and at the foot of each was a guard of cadets from the national military schools.



ORIGINAL VOLUME OF MINUTES OF THE PROCEEDINGS OF THE CONGRESS OF 1811 REPOSING IN THE CHEST CONSTRUCTED AS A PERMANENT RECEPTACLE FOR IT.

At 4 o'clock in the afternoon of this first day the Exposition of Fine Arts was opened. In addition to the collections of the masterpieces of European schools, this national institution has a wonderful exhibit of paintings from Venezuelan artists, not a few of whom have made international reputations, such as Tovar y Tovar, Arturo and Julio Michelena, Cristóbal Rojas, Emilio Maury, Tito Salas, and Inciarte, and their paintings are noted in foreign galleries.

In the evening the first Venezuelan Congress of Medicine was inaugurated, the meeting taking place in the national theater, and the exercises beginning with an address by the minister of public instruction. As stated by the orator of the day, the idea of the medical congress was really the first proposal made formally by an organized body to the Government for the centennial celebration. The Academy of Medicine of Caracas for three years gave its energy to developing this idea, and the result was evident in the work which the congress offered to the people of the nation. The care of the health of a people and the prolongation of life for the individual and for the race are noble subjects for study at the end of a century's growth and at the beginning of a new era. This seems to have

STATUE OF GEORGE WASHINGTON AT CARACAS, VENEZUELA.

This monument, which gives its name to the square wherein it is situated, was dedicated over a quarter of a century ago, at the celebration of the one hundredth anniversary of the birth of Bolívar. At the foot of this statue President Gomez, of Venezuela, deposited a wreath during the centenary exercises on July 4, 1911.

PRELIMINARY CEREMONIES TO DEPOSITING WREATH AT THE STATUE OF BOLÍVAR.

The wreath was carried to the statue by a United States marine under the escort of the naval and military attachés of the United States special embassy.

HON. THOMAS C. DAWSON, THE SPECIAL AMBASSADOR FROM THE UNITED STATES TO VENEZUELA, LAYING A WREATH ON THE STATUE OF BOLÍVAR IN CARACAS.

One of the most impressive and heartfelt ceremonies of the celebration occurred on the morning of July 1, when universal tribute was paid to the memory of Bolívar by decorating his statue with flowers. Venezuela thus honored her national hero, and all other nations represented joined with her. Ambassador Dawson, assisted by the first secretary of the special embassy, Mr. Hugh S. Knox, acted on behalf of the United States.

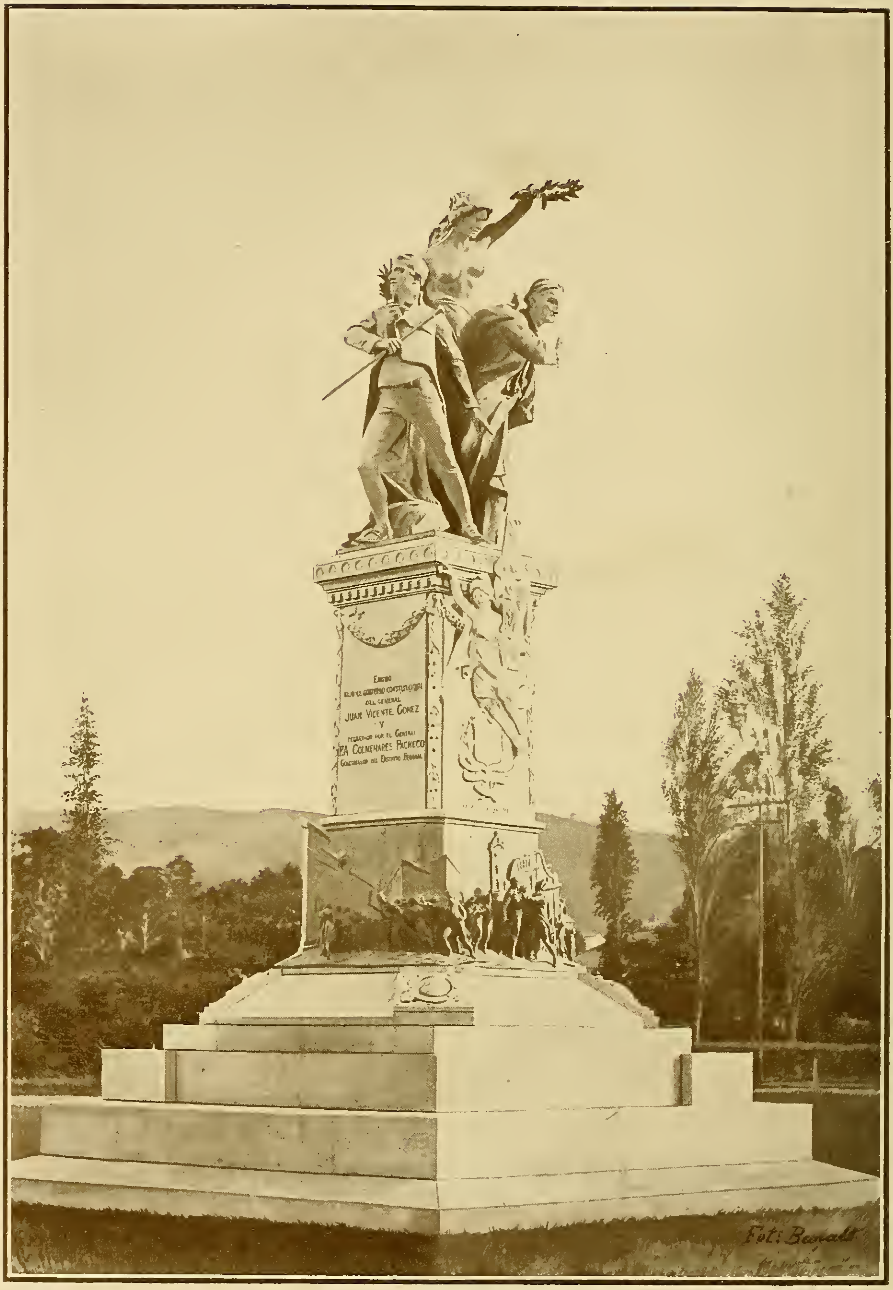
been realized with enthusiasm by all classes of society, and delegates were in attendance from every State in the Republic. There were 197 members altogether, determined to accomplish some work that would leave a permanent impress upon the times.

Thus the centenary of Venezuela's independence was auspiciously opened. The ceremonies of the first day united in a most happy manner the payment of respect and veneration to national heroes, a recognition of the splendid achievements of the century, a memorial to the founder of a country, the leader in a world movement, Bolivar; besides these, which were historical and of the past, the present was carefully considered by the dedication of a park that added its share to the embellishment of the capital, Caracas, already beautiful through many examples of municipal improvements; by the opening of the exposition which the people could enjoy and by which their artistic sensibilities, already so highly developed, could still more be nourished; and the future was equally well regarded, for the medical congress will exert influences that must be felt continuously for the country's welfare.

THE CEREMONY OF DECORATING WITH FLOWERS THE STATUE OF GEORGE WASHINGTON.

The people of Venezuela and the Government of the Republic have ever kept alive the memory of Washington, and the statue erected in his honor in the city of Caracas during the Bolívar centennial in 1883 is always decorated with flowers. During the centenary of 1911 a formal and impressive event was the placing by the President of a wreath at the foot of this statue on the afternoon of the Fourth of July.

This pleasant harmonizing of the past, the present, and the future, of history, culture, and governmental protection, of hero worship, beauty, and hygiene was preserved throughout the celebration. Coincident with the medical congress, for instance, was the inauguration of the anatomical institute, a building long needed by the medical



STATUE COMMEMORATING THE 19TH OF APRIL.

Monument representing the figures of Salias and Madariaga, two national heroes who participated actively in the movement for liberty during the agitation for freedom in 1810–11.

faculty of the university for the use of the attending students. Medicine in Venezuela has been treasured and the results of its practitioners have been excellent. History shows that a royal medical council was appointed in 1777, and almost immediately after the revolution—that is, in 1827—Dr. José Vargas, that noble patriot, physician, and president, established the medical faculty of the university. This new institute was the latest practical step in extending the usefulness of the medical faculty and of the Hospital Vargas, and it modernizes the science of teaching to the benefit of the whole nation. The meetings of the medical congress were continued for 10 days, and there can be no doubt of the great gain the country will reap by this bringing together of enthusiastic workers in science.

In recognition of the present the hours not devoted to the celebration of national events were more than filled by official or social functions in which Caracas and the Government of Venezuela performed their duties as hosts. First of all came the receptions to the special ambassadors, which, according to the program already announced, took place at 4 o'clock on the afternoon of June 30. It was a very dignified event, the national capitol being used for the purpose. The President of the Republic was stationed in the oval room (salon eliptico, as it is called) of the building, and the entire diplomatic corps, in which were of course included the special ambassadors, attachés, and secretaries, and also the delegates to the Bolivian Congress, were presented to him. Every step of the ceremony was imposing and impressive. The first and second battalions of the line formed in parade as the guests passed into the capitol, and on entering it they were greeted by the

GEN. JOSÉ ANTONIO PÁEZ.

A hero of the battle of Carabobo, and the first President of Venezuela.

INAUGURATION OF THE MONUMENT TO THE 19TH OF APRIL.

An avenue, a park, and a monument with this name were dedicated in Caracas during the centenary celebration. The 19th of April is the date sacred to Venezuelans, when, in 1810, their great cry for liberty was raised in Caracas.

strains of the national hymn and saluted by the hussars and the cadets of the military and naval schools. The address of honor on behalf of the diplomatic corps was made by the ambassador from Colombia, the dean of the body, the President replying to it by extending to them a welcome from the nation. The Bolivian Congress was then presented, the delegate from Ecuador being the spokesman, and the reply of welcome was given by the minister of foreign affairs.

GEN. MANUEL CEDEÑO.

The four statues, appearing on this and the following page, were unveiled in Caracas on the centennial anniversary of the battle of Carabobo, June 24, 1911, and were erected in honor of the four heroes of that decisive event. Cedeño, a Venezuelan, and Plaza, a Colombian, were friendly rivals, and as there was danger that they might not be in the engagement, they, with Bolívar's approval, volunteered for the event, and thus lost their lives for Venezuela. Ferriar belonged to the so-called English regiment, and Camejo was among the forces fighting under the service from Haiti.

GEN. AMBROSIO PLAZA.

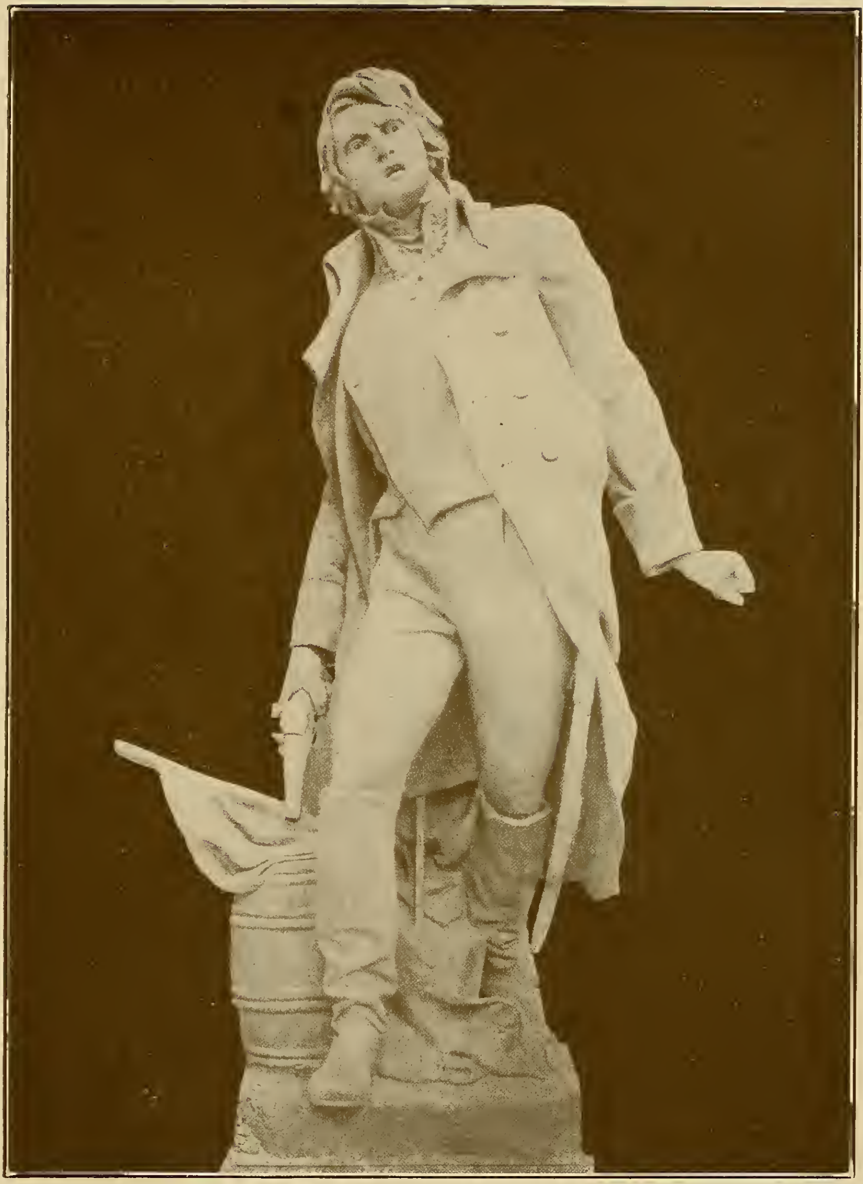
This formal function was by no means the only one extended to the foreign visitors. In fact, the representative from each nation was received individually on a special day as close as possible to the hour of his arrival. The President of the Republic seemed tireless in these acts of cordial hospitality and took every occasion, not only in these special receptions and public audiences, but also in the midst of the numerous exercises which marked the celebration, to demonstrate that Venezuela on the one-hundredth anniversary of the declaration of independence had a smiling and sincere greeting to all the world.

Other guests besides those on a diplomatic mission were welcomed in the capital. Many visitors from the interior of Venezuela came to Caracas to take official or unofficial part in the celebration. The States sent delegates, the press of several countries were represented, and among interesting bodies was that of the cadets of the Republic of Colombia, who came on a special military mission to Venezuela as a mark of respect to that nation with which it had fought side by side in the early days of the struggle under Bolivar. There were about 170 members in this splendid organization and during the festivities they attracted the attention of all who saw them.

CORONEL RAFAEL FERRIAR.

TENIENTE PEDRO CAMEJO.

Not a day, it can be truthfully said not an hour, went by without some function or entertainment, social or otherwise, to contribute to the ceremonies or to add to the enjoyment of the guests and of the people. The multiplicity of the activities was overwhelming, and yet the program was faithfully carried out in every detail, with no confusion to either guests or hosts, and with unfailing good nature on the part of all. The streets were crowded, the carriages and automobiles passed continuously from one part of the city to another, the parks during the day were full of pleasure seekers listening to the music of many bands, and the theaters



STATUE OF RICAURTE ERECTED IN SAN MATEO.

Antonio Ricaurte belongs to both Colombia and Venezuela. He was born in Bogota in 1792, enlisted in the revolutionary army under Bolívar, and was killed at San Mateo, March 25, 1814. San Mateo is near La Victoria, 42 miles (67 kilometers) from Caracas. Above the village is a hill on which was a house, turned into a fortress at the time, and there the little army under Ricaurte seemed doomed. He, however, commanding his men to escape down the hill, waited alone on the summit until surrounded by the Spanish soldiers and then dropped a lighted cigar into the store of gunpowder at his side, thus blowing the enemy, and himself with them, to atoms, but saving his own men for further usefulness in the field.

in the evening were brilliant. Caracas was gay again, in a way that reminded the onlooker of the gaiety of that beautiful city years and years ago.

To name all the social functions of the centenary would deserve a chapter by itself. Private citizens vied with officials in lavish entertainment. Luncheons, dinners, and balls followed each other to the end of the celebration. There were operas, and a few bull fights, although the Venezuelans are gradually forgetting this sport of Spain and substituting for it the lively baseball or the more humane horse races, several of the latter being run to the delight of the spectators.

SR. GEN. RAMÓN GONZÁLEZ VALENCIA.

Ambassador from Colombia to the centenary celebration in Venezuela.

The most elaborate function of the many prepared was the banquet offered by the President of the Republic to the guests of the nation. This was given on the night of July 5, the anniversary of the signing of the declaration of independence. It took place in the palace of Miraflores, which only a few hours before had become the official residence of the nation's executive, and a total of 78 distinguished personages of both sexes had the honor of attending it. The President of the Republic, through the minister of foreign affairs, spoke a welcome to his guests. The ambassador from Colombia responded to the President and finally the following toast was drunk:

> May Heaven grant that, at the beginning of this second century of the Republic's life, Venezuela shall continue with firm step in the path of progress. May Heaven grant that, at the conclusion of this second century, Venezuela will be found at the side of her sisters in America, and that they, from one pole to the other, may be in perfect accord with all the nations of the earth.

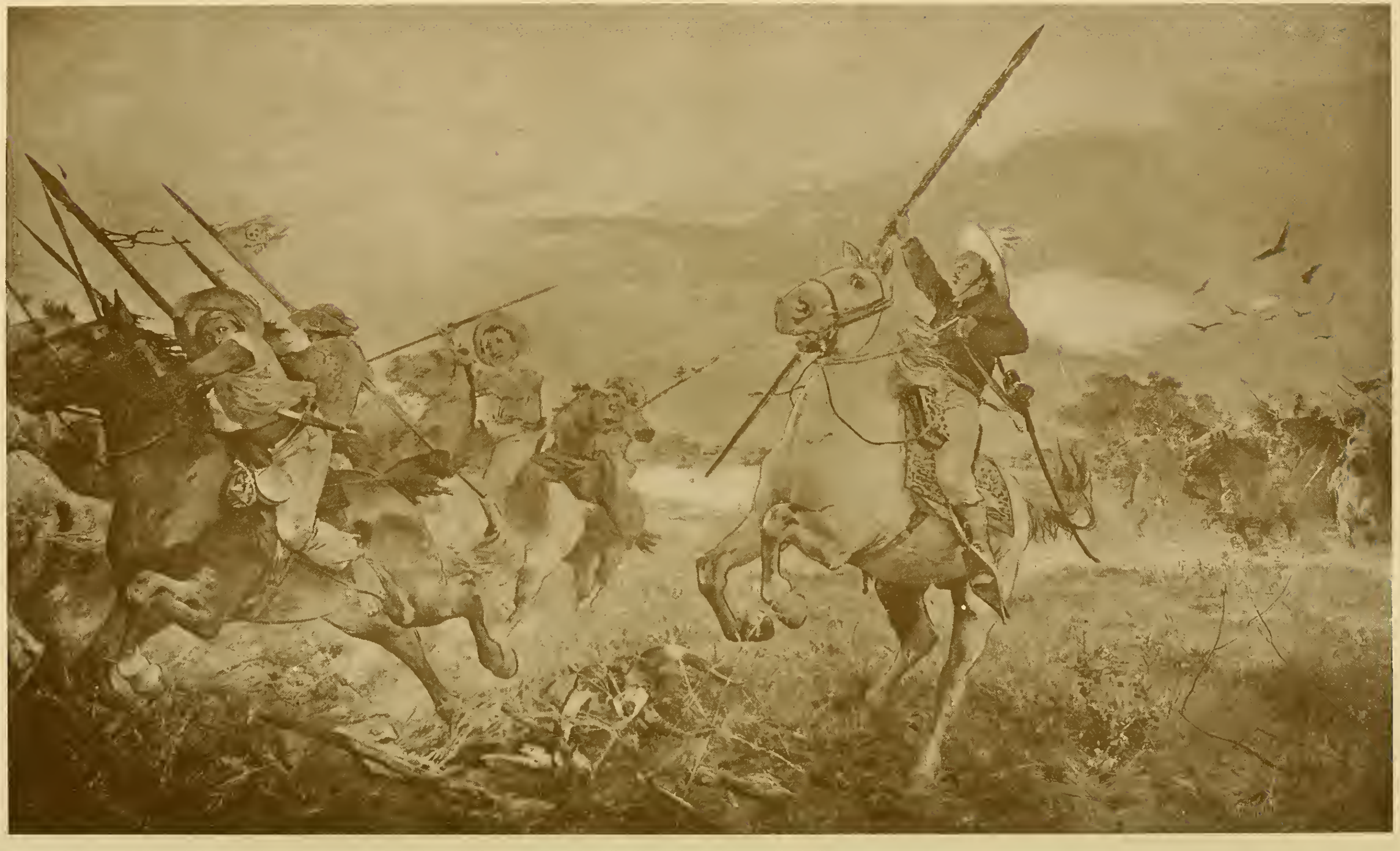
Following this brilliant banquet came what one of the poets of Caracas called the still more brilliant ball in Miraflores, at which the President of the Republic was again the host. The society of Caracas turned out en masse, and the glitter of uniforms, the grace and beauty of the Venezuelan women, the exquisite flowers of the Tropics, made a wonderfully unique scene, while the glory of the clear sky above the city and the shadows of the surrounding mountains showed a setting such as only Caracas can offer.

During the "great week" (semana magna) banquets and receptions came thick and fast. Each delegation was honored by individual distinction of special character, and each in its turn reciprocated the honor by a courtesy in kind. The clubs also showed an open hospitality, and many were the gatherings—small and large, but always select—which took place in these attractive social centers. The festivities have passed, but the thought of them remains in the minds of those who were fortunate enough to be present as an ever green memory of the generosity of the people of Venezuela.

But other ceremonies, linking the present with the future, were material in their design. The first of these, on the evening of July 1, was the reception by the Government, through the hand of the minister of public instruction, of the triptych painted by the Venezuelan artist, Tito Salas. This beautiful work is an allegorical picture, embodying in three symbols the conception and execution of the life purpose of Bolívar, and his final rest from the world's conflicts—a magnificent design magnificently performed. The composition is of heroic size, 9 by 6 meters (almost 30 by 20 feet), and occupies the west wall of the cabinet room in the federal palace. It is an added

SR. DON ANÍBAL MORILLO Y PÉREZ, MARQUÉS DE LA PUERTA AND CONDE DE CARTAGENA, AMBASSADOR FROM SPAIN TO THE CENTENARY CELEBRATION IN VENEZUELA.

The grandson of the famous Gen. Morillo, who at one time had charge of the Spanish forces opposed to the revolutionary army of Bolívar in Venezuela. The ambassador endeared himself to his official hosts, to the people of the country, and to the Spanish colony resident there. One of his fine acts was the gift, on July 15, to the Venezuelan nation, of the cross of Isabella the Catholic, the very decoration worn by his illustrious grandfather when he parted so affectionately from his formal enemy, Bolívar, November 27, 1820. No greater pledge of his and his country's sincere friendship could be conceived, and the people of Venezuela, thoroughly appreciative of his generosity, have placed this decoration among their most treasured mementos of their hero in the Bolívar Museum in Caracas.



VUELVAN CARA.

"About face" is the name of this celebrated painting, which is on view at the City Hall, New York. It was presented to that municipality by Venezuela in gratitude for the honor paid by New York City to the body of General Páez, the first President of the Republic, who died there May 7, 1873, his body being brought home to his native country to be interred in the Pantheon of Caracas. The scene is an episode in the battle of Queseras del Medio, April 1, 1819, in which General Páez, with a small troop of his llanero horsemen, overwhelmingly defeated a far superior number of the picked cavalry of the Spanish army under their commander Morillo. The painting is one of the best works of the Venezuelan artist Arturo Michelena.

proof of the high place Venezuela holds in art and should be seen, along with the works of Michelena and other native artists, by visitors to Caracas. Salas was decorated for this masterpiece with the order of the Bust of Bolívar, the most distinguished honor granted by the Government.

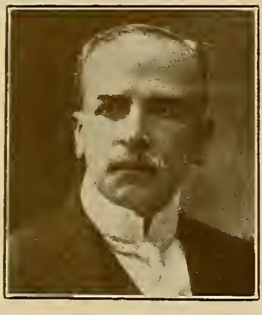
SR. DR. ALBERTO GUTIÉRREZ.

Ambassador from Bolivia to the centenary celebration in Venezuela.

Of monuments erected and dedicated during the celebrations in various parts of the country there were many. One which appeals strongly to the sentiment of all soldiers and illustrates a very romantic episode in history was a monument to the young hero Ricaurte, in the village of San Mateo, not far from La Victoria, west of Caracas. Another was the statue, unveiled on July 3 in the national pantheon, and a gift of the medical profession to the country, of the illustrious Dr. Vargas. Then there were memorial tablets placed in the walls of the old house in which the Patriotic Society held its meetings while the declaration of independence was under discussion, in the walls of the Government palace, and on the face of the municipal building. Others were inserted on the façade of the Yellow House in commemoration of the hero Jose María España, and in the cathedral wall to mark the spot made historical by the act of the 19th of April, 1810, when the actual revolt against Spain began. Later in the afternoon of the same day, July 4, a monument to José Felix Rivas was inaugurated in the park bearing his name.

SR. DR. JOSÉ PERALTA.

Ambassador of Ecuador to the centenary of Venezuela.


SR. DR. MELITÓN PORRAS.

Ambassador from Peru to the centenary celebration in Venezuela.

This 19th of April is to Venezuela about what the date of the Battle of Bunker Hill is to the people of the United States. It concentrated the forces and the spirit of the patriots. A fitting memorial of the date, therefore, was the dedication of a monument, to be called the Diecinueve de Abril, in the park of the same name. The ceremony, held on the afternoon of July 3, was attended by practically the entire population of Caracas, because it was the crowning event of the celebration during the days preceding the independence day, and logically led up to it. The monument is really one of the most beautiful specimens of modern sculpture. Resting on a granite base, it shows the forms of Salias and Madariaga, while above them, in allegorical effect, circles a figure about to crown them with a wreath of laurel. This statue, in the center of the park, and the approach to it along a splendid avenue, recently dedicated, all bearing the name of the date which they commemorate, are in themselves beautiful; but when their purpose is considered, and the patriotic act of that day thereby recalled, it is will be acknowledged that the ideals of nationality become still more firmly rooted through their aid.

SR. DR. FRANCISCO HERBOSO.

Special envoy of Chile to the centenary of Venezuela.

SR. DR. ROMULO S. NAON.

Minister from the Argentine Republic to the United States, who represented his country as special envoy during the centennial celebration of Venezuela.

SR. DON GUILLERMO PATTERSON.

Representative from Cuba at the centenary of Venezuela.

And even with these national monuments as material memorials of a glorious past, there was not enough. Foreign countries also claimed the right to add to the number, and therefore Caracas is by so much more a gainer for the future. For instance, the Syrian colony, on July 3, presented to Venezuela a statue dedicated to Bolivar, and the cornerstone of its pedestal was laid with fitting ceremonies. The people of Haiti remembering, as Bolivar would never let them forget, that they had helped him in times of discouragement and distress, and that their Republic had lent to Bolivar substantial aid which helped to turn the scales in favor of freedom and independence, dedicated a statue to their hero, Petion, as their gift to Venezuela. This act of fraternal generosity took place on the afternoon of July 10 in the little square, to bear his name, near which the monument of Carabobo was erected. The German residents of Venezuela, mindful of the enthusiasm of the medical congress and restricting themselves to this practical but equally

AT THE RECEPTION JULY 4, GIVEN BY THE AMERICAN MINISTER AND MRS. GARRETT, IN THE LEGATION.

President Gómez and his cabinet were the principal guests, with others of the officials in attendance at the celebration.

important side of life, contributed to the hospital and the attached medical school a richly equipped bacteriological laboratory.

The Spanish colony offered to the Republic of Venezuela a bronze monument representing the famous moment in history when Bolivar and Morillo, on November 27, 1820, embraced each other in friendly farewell, although the former was the leader of the revolutionary army and the latter the Spanish general sent to oppose him. Morillo had signed a peace agreement and hoped he was soon to be on his way home to Spain; Bolivar thought the end of the war was at hand, not knowing that the battle of Carabobo was yet to come, and both, therefore, with sincere respect for each other, showed their personal admiration for a worthy enemy by a warm embrace, which means so much to the Latin heart. This episode is to be reflected in permanent bronze, and it was appropriate, therefore, that the grandson of Gen. Morillo, in the person of the Spanish ambassador, Marquis de la Puerta and Conde de Cartagena, should make the address of presentation, as a proof that neither he nor the Spanish people nor the King could wish but the sincerest success for the Republic which broke away from them 100 years ago.

THE ANATOMICAL INSTITUTE IN CARACAS.

This new building was dedicated June 25, 1911, as part of the centennial festivities in Venezuela. Medical education has been carefully fostered in the Republic, but facilities for teaching anatomy, the groundwork of the science, have been hitherto lacking. This thoroughly equipped structure is a material memorial for the end of the old and beginning of the new century.

How is it possible to name all the details, the incidents, large and small, the trivial or serious events, expected or unexpected, which composed this dignified and delightful celebration of a century of Venezuela's independence? It would be wrong to overlook the many other official and unofficial acts of the busy month, and yet they can scarcely be mentioned, however much notice they really deserve.[1] There was the fête of the school children, for instance, who offered their tribute of homage to their national hero; and many organized bodies of the people in all walks of life paid the same respect to him. Then in the realm of practical things, there was the

LAYING THE CORNER STONE OF THE BOLÍVAR AND MORILLO MONUMENT.

One of the interesting episodes of the war of independence in Venezuela occurred on November 27, 1820, when Bolívar, commanding the revolutionary forces, and Morillo, commanding the Spanish army, embraced and said good-by to each other, thinking that the peace agreement just signed by them was to end the war. Each had a high personal regard for the other, and were glad to think that cordial farewell would only increase their friendship. The hands of time brought around the century of independence, and Spain, generous to her former American colony, sent as her special representative to the Venezuelan centennial celebration, to do honor also to Bolívar, the grandson, the (Count of Cartagena,) of that very Morillo who had left the country 100 years ago. The Spanish colony in the country decided, therefore, as a token of their sincere appreciation of their adopted home, to give to Caracas a monument illustrating this event, and its corner stone was laid on the 1st day of July.

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[1] The official program is given in the Bulletin of June, 1911.

inauguration of the surgical pavilion of the hospital in the university, and of other departments the activities in which will promote the education of the youth of the land. The opening for public service of the new Post and Telegraph Building was also of moment as demonstrating that material advance was one of the motives of the centenary. This was true as well of the completion of the steel dock at Puerto Cabello, the deepest seaport of the Republic, where the commercial interests are strong, and where every effort is making to take proper care of a rapidly growing shipping industry. In other cities and towns, too, outside of the capital, the same enthusiasm was displayed, and no false note seems to have been struck, no word of hostile criticism uttered against the celebration itself or its purposes.

Yet, taking the material improvements accomplished, the artistic principles satisfied and the spirit of nationalism intensified, it was profoundly evident that the great chord struck throughout the ceremonies was that of Bolivar. In that aspect of the celebration, five events stand out most clearly, and the record of them should serve as a fitting conclusion to this all too imperfect narration of Venezuela's centennial. These are the gathering of the Congress of Bolivar, the placing of a tablet to the memory of Bolivar's parents and wife, the deposit in a secure chest of the (original) minutes of the Congress of 1911 for the eternal benefit of the Republic, the general homage at the tomb of

PRESIDENT GOMEZ LEAVING THE U. S. S. "NORTH CAROLINA" AFTER THE RECEPTION ON JULY 8.

The President, with his suite and the diplomatic representatives from the United States in Venezuela, were the guests on the *North Carolina* lying in the harbor of La Guaira. A special train brought the entire party from Caracas in the morning and took them back late in the afternoon. In the toast of welcome the commanding officer of the ship, Capt. Marsh, said that the two distinguished guests had been President Taft and President Gomez, and that equal honors were of course extended to both as the heads of sister Republics.

Bolivar in the national pantheon, and the same tribute of love and veneration, by hosts and guests alike, at the statue of George Washington.

The Congress of Bolivar called together the representatives of the present Republics over which Bolivar exerted the greatest influence: Bolivia, Peru, Ecuador, Colombia, and Venezuela. Its purpose was to a large extent one of sentiment, but it had also its practical side, for these countries, being territorially so close, can be allied in conditions that make for modern progress, and the discussions of the Congress gave promise that international agreements would not be so very long delayed.

No one, however, who witnessed the ceremony on the 1st of July, when, after a solemn mass in the cathedral, Bolivar Square was crowded with people and the monument to the Liberator was covered with flowers, or who, on the Fourth of July saw the same gathering, with equally spontaneous reverence, pay the same touching tribute to the statue of Washington, can doubt the basic sincerity of the people, their determination to seek and to follow ideals, and their confidence that always, when necessity arises, similar leaders will be found to advance them toward the true goal of civilization. Political strife may at times be fierce, nature and society may be unruly, the complexity of life may daunt even the courageous, but so long as Venezuela holds true to her love of Washington and Bolivar, her nationalism and her patriotism must remain secure.

THE COLOMBIAN CADETS IN CARACAS DURING THE CENTENNIAL CELEBRATION OF VENEZUELAN INDEPENDENCE.

The Military Cadets of the Republic of Colombia have a fine organization, and, as a mark of respect, that Government sent them on a special mission to the Republic of Venezuela, to take part in the centenary exercises. The body numbered about 170, and as they showed a splendid discipline in all their movements their presence added greatly to those functions in which they officially took part. They were also heartily entertained in many social ways, and many cordial friendships between these young men and the members of the corresponding organization in Caracas were cemented.

CENTENNIAL ANNIVERSARY OF THE BIRTH OF SARMIENTO

SCARCELY had the memory of those spectacular displays begun to dim, those splendid pageants which made the celebration of Argentina's Centenary of Independence memorable in the history of America, when the Argentine Republic commenced preparations for another celebration. This time it was to pay tribute and homage to one of its greatest national characters, Gen. Domingo Faustino Sarmiento, on the one hundredth anniversary of the day of his birth. Brilliant processions were held throughout the Republic, and an impressive commemorative service was observed in the beautiful Colon Theater at Buenos Aires. A special issue of postage stamps, bearing the bust of Sarmiento, was circulated throughout the country. The name of one of the principal thoroughfares of the capital, Cuyo Street, was officially ordered changed to Sarmiento Street, as a permanent honor, and in addition 50,000 commemorative medals were struck bearing the portrait of the former President, and 50,000 biographical sketches were widely distributed. To defray the expenses of the celebration, the Government appropriated a substantial sum.

It was indeed a most fitting celebration which was accorded the noted scholar, patriot, statesman, and some time President of the Republic—for Sarmiento was more than a citizen of Argentina—he was a citizen of the New World, called America. He was born in one of the oldest Argentine cities and visited every South American country. Nor did he confine his ideals within the borders of his own country, but came to the United States to voice his thoughts on Pan Americanism. He was the first South American diplomat to receive an honorary degree from a United States university. In his practical efforts to promote closer relationship amongst the American Republics he covered the banks of the Parana with osier trees that he brought from Chile; he persuaded Gould and Davis from Harvard University to read the stars at the older University of Cordoba, and induced many teachers from all over the United States to found schools in Argentina. He could discuss the problem of America with Dom Pedro at the palace at Petropolis, with Abraham Lincoln in the White House, and with his school children at Chivlcoy. He founded

Come, thou bright harbinger, whose vision clearly
Foresaw the future way
Which our great Henry Clay
Standing with Sergeant in that morning early
Presaged at Panama;
That era when all war
Should leave the sister lands, that then so sorely
Were thereby oppressed. At Lima thou didst tell
Of the Republics' peace, which increaseth so well.

The tyrants' time has gone. The summer's grasses.
That all too sudden on Caseros' plain
Are bloody, greet Urquiza as he passes,
To reconstruct again
Into a nation all the fourteen States,
Make one their divers Fates,
The past forgetting, as the autumn rain
Drives off the dust that blinds the eyes of men.

Then thy return, from an exile not wasted,
But filled with useful and constructive years,
San Martin taught thee how, for he had tasted
The cup of bitter woe that Anguish bears.
Chile may claim thee as thou onward hasted
To ripen thy career, whose true unfolding
Cast Pan-Americanism into a deeper molding.

And thou, glad Argentine, rejoicing duly
In thy beloved son,
Come and make merry, for he loved thee truly;
When his life's work was done
Without a murmur, as the evening coolly
Speedeth the dying sun,
See his example spread, as loom the cares
Through the dim future of a nation's years.
C. L. C.

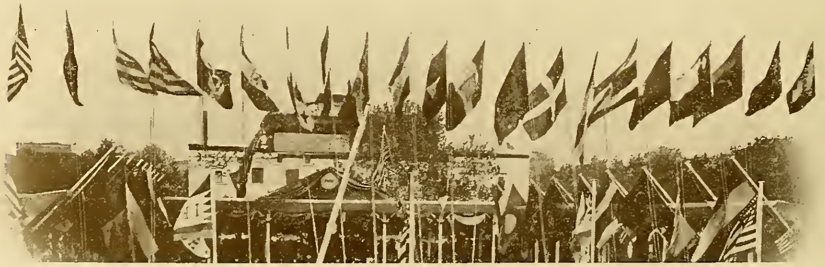
the first normal school in the two Americas and furnished much food for thought on the subject of education in the United States. It is indeed rare for the reputation of a President of a Republic to become permanently and nationally glorified without military prowess, and nothing can better bespeak the innate soundness of the Argentine character than its reverence for the President who reduced its standing army to a minimum; who concluded as honorable a peace with Paraguay as was ever negotiated, refusing to allow an inch of conquered territory to be added to Argentine soil.

Gen. Sarmiento welcomed foreigners. He opened the first large exhibition ever held in South America and did much to forward the great southward movement of the Argentine Republic, which is adding a vast area of settlement to the nation's resources. Several quotations from his writings are of especial interest, the first displaying the affection which he bore for the United States, and the second an expression of his true Pan Americanism.

"ALL WOULD LIKE TO BE FRANKLIN, A SELF-MADE MAN."

[Translation of extract from Sarmiento's Las Escuelas, Base de la Prosperidad de los Estados Unidos, p. 311. (1869.)]

It is thus that the history of the Spanish colonies and the literature of their language, the monuments and vestiges from other ages that cover their soil, the exploration of the great rivers and their tributaries, the geology and nature of the fields washed by them, the means of land communication to expedite intercourse, and even the constellations of the austral sky, have for the last half century been stimulating the activities of the North Americans, just as if those subjects had been an integral part of their own history, geography, and sky, and just as if that part of the world had been a natural continuation of their country and a vast field for their activity and enterprise, the nature of things, rather than an acknowledged homogeneity, leading them to extend their action over those countries and to open the unexplored regions therein to human knowledge. Are there not in this movement laws regulating and animating it, just as a watercourse is directed to a certain channel by the declivity and depression of the soil?



THE CELEBRATION OF THE CENTENNIAL OF INDEPENDENCE IN PARAGUAY

IN Latin America history is in the remaking. The present is the time of retrospection, of review, of renewal of what has been accomplished during the 100 years, and with this refreshened knowledge it is also the time of preparation for the future, for improvement during the 100 years to come.

Practically all of Spanish America recognizes the year 1810 as one of deep significance. While many Republics trace the generation of their struggles for liberty to an earlier date, Argentina, Chile, and Mexico looked back to 1810 as the precise year in which their independence was proclaimed. Several Republics, on the other hand, although they took part in the great revolution, waited till somewhat later before their declaration could be formalized. Venezuela has just finished the celebration of the passage of the century since, on July 5, 1811, their declaration of independence was signed. And almost contemporary with that sister Republic of the northern part of the continent, in fact preceding the day by scarcely two months, another Republic, in the south, Paraguay, concluded the festivities which marked the completion of 100 years of national existence. The essentials of the history of that Republic must be first given, however, before the celebration is described.

Paraguay was settled slowly, and the Indian inhabitants of the country were so numerous that its natural agricultural development always remained in their hands with relatively small migration from without. At first the region was attached to Peru. When the viceroyalty of Buenos Aires was established in 1776, and was subdivided into eight intendencias, Paraguay became one of the four southern intendencias, under a lieutenant governor appointed from Buenos Aires, with residence in Asuncion.

When the first movements of political unrest manifested themselves in Buenos Aires in the beginning of the nineteenth century, the remote regions of Paraguay were but little disturbed, and they were less interested in becoming part of that movement than they were in asserting an independence of their own. An effort made by the revolutionary party of Buenos Aires to absorb the intendencia was repulsed by the Paraguayan forces from Asuncion. Somewhat before the Argentine declaration of independence, however, three parties had developed in Paraguay—those who wished to be let alone but to strengthen their local self-government, those who would attach themselves to Buenos Aires, and those who had a strong desire for absolute and national independence. The two last had the common purpose of overthrowing the Spanish governor. When, therefore, the revolutionists from Argentina failed in their mission to secure the adherence from Paraguay, it had at least the direct effect of setting aflame the nascent patriotism of the country, and as soon as plans could thereafter be prepared, the revolution, which now meant absolute independence, broke.

The 14th of May, 1811, was the time fixed by the plotters. At 10 o'clock in the evening, the signal—a sudden and violent ringing of the cathedral bells—was to be followed by the seizure of the Government barracks. And, in fact, the plan was carried out with no interruption whatever. The people were in sympathy with the conspirators, the troops made no resistance, and the power of Spain was destroyed without a struggle or the loss of a drop of blood. The governor at first offered a feeble denial of the authority of the leaders, but on the next day, the 15th of May, he acknowledged their victory and for a short while was allowed to act under their direction. Thus Paraguay and

(Photos by courtesy of W. Newton Gulick.)

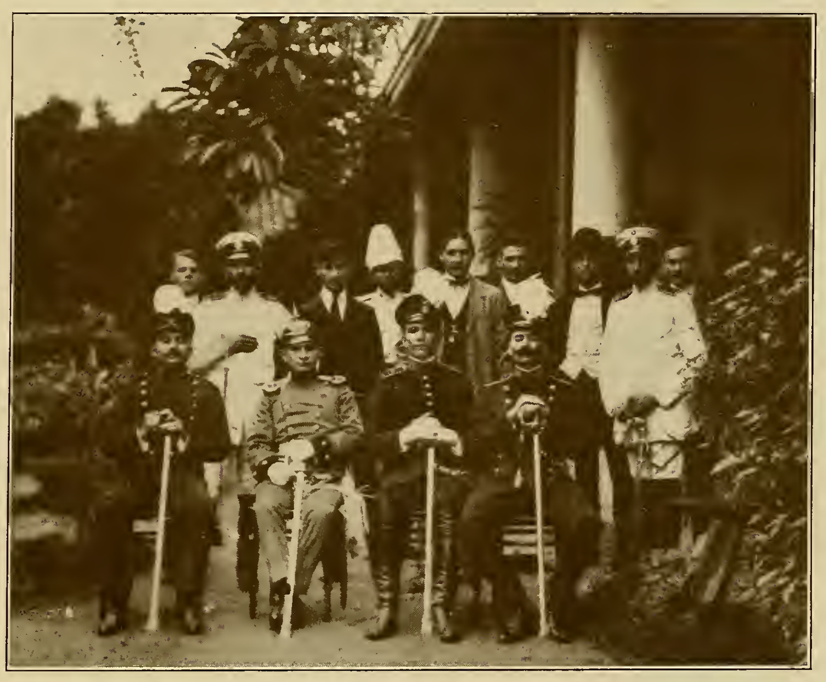
THE PRESIDENT OF PARAGUAY AND MINISTER OF FOREIGN AFFAIRS ENTERING THE CATHEDRAL FOR THE TE DEUM CELEBRATION.

The celebration of the Te Deum service during the centennial exercises was the one great event in which all classes participated. This service is characterized by its solemnity and impressiveness.

Brazil can boast of having become Republics in America without a battle or bloodshed.

May 14 is therefore the birthday of Paraguay. On that day, 1911, the Republic was 100 years old, and a national celebration of the event took place. Officially, more than the one day was dedicated to the centenary exercises, so that an entire week, from May 13 to May 20 was a holiday, with the 14th and 15th the central days.

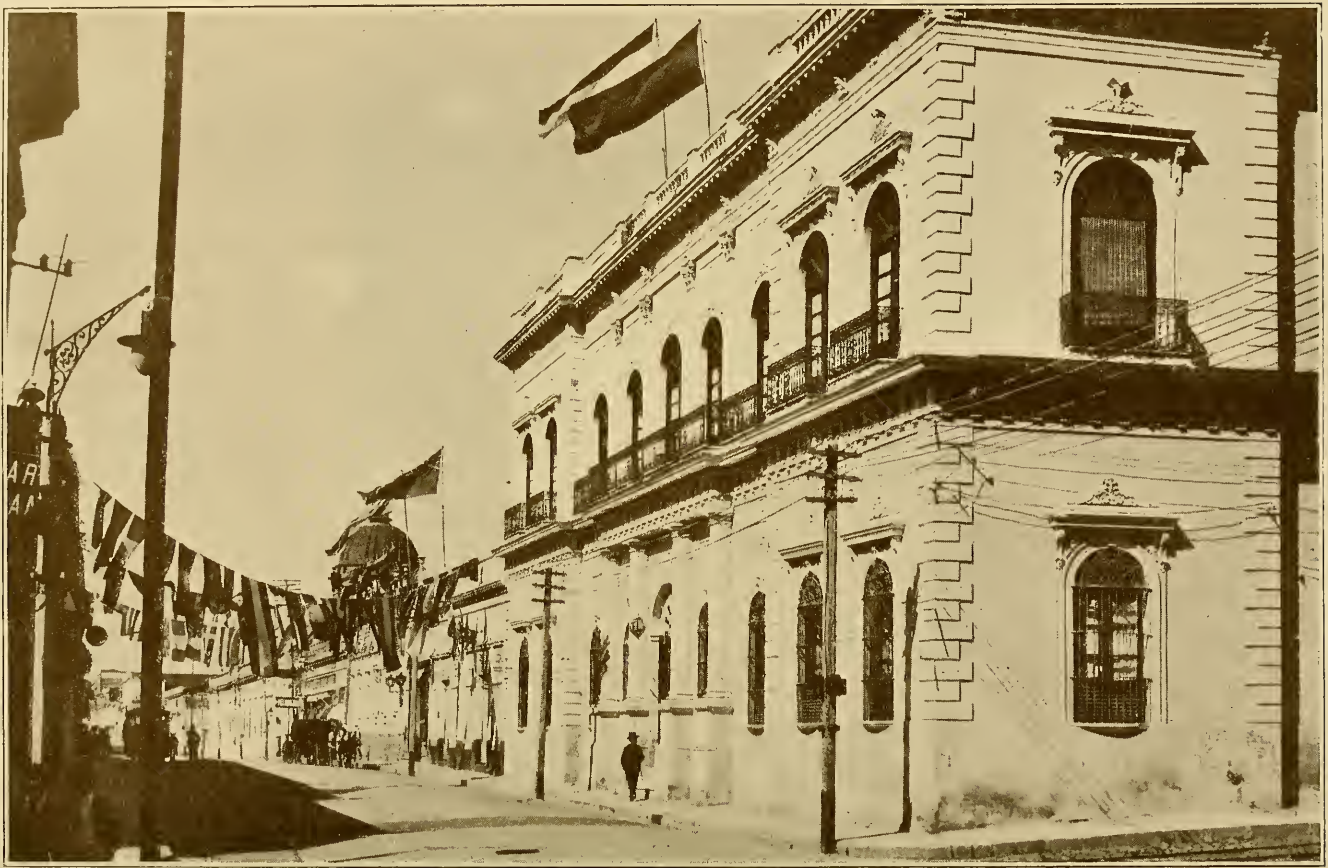
Nationalism was the essence and spirit of the ceremonies, and every effort was made to emphasize the feeling that Paraguay had assumed a place in the ranks of Latin American Republics. The occasion was one rather of rejoicing and hopefulness than of retrospect and memorials, yet careful attention was given to impress upon all citizens, and especially upon the pupils of the schools who would soon become citizens, that a love of country was the key of liberty.



OFFICERS OF THE PARAGUAYAN POLICE.

By their excellent discipline and military bearing the police were conspicuous factors in the centennial celebration of the Republic.

Thus it happened that one of the very first events of the celebration was the festival on the 13th of May in the Government normal school in Asuncion. Poems were recited, many of them original, too, dealing with the sentiment of patriotism, addresses were given by those fitted to advise the growing youth of the land, and the national anthem was sung by all in attendance, the strains being voluntarily



MAIN STREET IN ASUNCION, THE CAPITAL OF PARAGUAY, IN GALA ARRAY FOR THE CENTENNIAL CELEBRATION, MAY 13–20, 1911.

The house on the right was formerly the palace of Don Carlos Antonio Lopez, the first President of that name, who was elected for a term of 10 years in 1844, and reelected in 1854. He died, however, before the completion of his second term, and was succeeded by his son Don Francisco Solano Lopez. The building is now occupied by the Hotel Hispano-Americano.

taken up by those outside, in the streets and public squares, till the whole city echoed with the refrain.

The week was busy with processions, some of flowers, some of the army or other military organizations, some of allegorical presentations. All these the people enjoyed to the utmost, and as they were carried over into the evening exercises, the streets of the capital were gay and lively at all hours of the day and night.

There were balls, concerts, receptions, social meetings, hospitable gatherings in clubs, private houses, and public places, and several charitable entertainments for the poor. A new occurrence for Asuncion was the opening during the semana patria (week of patriotism) of an exposition of fine arts, in which several paintings by native artists were on view. These attracted the attention of many who were able, by a wide experience in other cities, to judge of their merits, and the verdict is that Paraguay is developing artists of commendable skill.

THE POST AND TELEGRAPH OFFICE AT ASUNCION, PARAGUAY.

This edifice, typical of many Federal buildings of Paraguay, is notable for its spaciousness and suitability for the expeditious handling of the mails.

As youth and activity seemed to be the motif of the week, it was proper that one of the principal events of the celebration should be a series of Olympic games, to show how the young people of the Republic were preparing themselves physically for their future responsibilities. There were running races, bicycle races, feats of skill and endurance, and trials of strength. These exhibits extended over several days, and were probably as popular, among the out-of-door entertainments, as any in which the public could have their share. In such pleasures and diversions the celebrations passed, although it must not be understood that the serious side of the centenary was overlooked or that no attempt was made to urge upon the people the value of progressive citizenship. Paraguay is determined to develop its opportunities, and the coming century of independence will show how much of material benefit the Republic can offer to mankind.

Yet Paraguay to-day is by no means the unproductive and inactive country which, so very unfortunately for itself and for those credulous of indefinite rumors about it, these rumors would suggest. But lest it should seem that the BULLETIN, in its endeavor to awaken interest in Latin America, omitted occasionally to present every point of view, it takes pleasure in this regard to refer to a German authority which also looks with favorable eyes upon that Republic:

> Paraguay is more than half the size of Germany, but the population of the country is by no means in proportion to its size. The land, however, is rich and fertile, splendidly adapted for cattle in the eastern portion and well supplied with forests on the west. Railways are few, but water transportation is abundant, although direct communication with Europe by way of the mighty Parana and Paraguay Rivers is not regularly established. This is to be regretted, because it is easily possible, and the fact was demonstrated 60 years ago. If Germany recognized the advantage of this direct trade, both countries would gain thereby. The climate is mild and healthful. The chief products are oranges, sugar cane, rice, corn, bananas, coffee, cotton, Paraguay tea and tobacco, the last being received in Germany at a very good price because of its excellence. The cotton is of a fine quality, and with more extensive cultivation it should prove a factor in the world's markets. Paraguay offers an encouraging field for the investment of capital (German, in this case), and Germans ought to take advantage of the opportunity. Cattle and lumber afford excellent openings. The chances for the foundation of colonies are very favorable, and those already in existence have met undeniable success. Paraguay has, to be sure, its internal troubles and irregularities, but the Government is making earnest efforts to overcome them.

GROUND-BREAKING CEREMONIES OF THE PANAMA-CALIFORNIA EXPOSITION AT SAN DIEGO, CALIFORNIA

On Wednesday afternoon, July 19, 1911, President William H. Taft pressed a key in the East Room of the White House which turned on the electric current and unfurled to the breezes of fair San Diego the flag of the President of the United States, and by this act signalized his official participation in the formal opening and ground-breaking ceremonies of the Panama-California Exposition which is to be held at San Diego during the entire year of 1915. Nor did the President's interest in the exercises stop at this point, for at Balboa Park, the 1,400-acre site which has been selected upon which to build this wonderful exposition, the scene of the afternoon's ceremonies, there was present the Director General of the Pan American Union, John Barrett, as the personal representative of the Nation's Chief Executive. To the audience, numbering over 20,000, who had come to witness the officers of the exposition, their staff, and invited guests, lay the corner stone of the first building, Mr. Barrett conveyed the real and sincere felicitations of the President by reading the following communication from him:

THE WHITE HOUSE,
Washington, July 11, 1911.

MY DEAR MR. BARRETT: I have yours of July 11, in which you advise me that in response to an invitation to you as Director General of the Pan American Union you are going to the ground-breaking ceremony of the Panama-California Exposition, to be held at San Diego from January 1 to December 31, 1915. This ceremony, I believe, is to take place from the 19th to the 22d of the present month.

I beg that you will acknowledge for me the courtesy of the management in having extended an invitation to me to attend this ceremony. I can not myself be present, but I should be very glad to have you represent me there and make appropriate remarks on the occasion.

San Diego is so situated that she is necessarily very much interested in the opening of the Panama Canal, and the fact that this exposition is to give particular attention to the relations between this country and the Central and South American countries is sufficient reason why the American public should be especially interested in its success.

PRESIDENT TAFT'S SPECIAL REPRESENTATIVE TO THE GROUND-BREAKING EXERCISES OF THE PANAMA-CALIFORNIA EXPOSITION, JOHN BARRETT, DIRECTOR GENERAL OF THE PAN AMERICAN UNION.

Mr. Barrett reading letter in which President Taft refers to his interest and love for the people of San Diego and their city, and delegating Mr. Barrett as his special representative to the ground-breaking ceremonies, July 19–22, 1911.

You will convey my compliments to the managers and to the people of San Diego and say to them what you know of my interest in our Central and South American relations and in the usefulness and successful issue of the exposition.

Sincerely yours,

William H. Taft.

Hon. John Barrett,
Director General, Pan-American Union.

P. S.—I know San Diego because I have been there twice, my father and mother and sister lived there for years, and my father died there. I appreciate the singular beauty of its situation and the wonderful character of its climate. And all these circumstances give me a personal interest in promoting its welfare and in helping to assure the success of an enterprise like this.

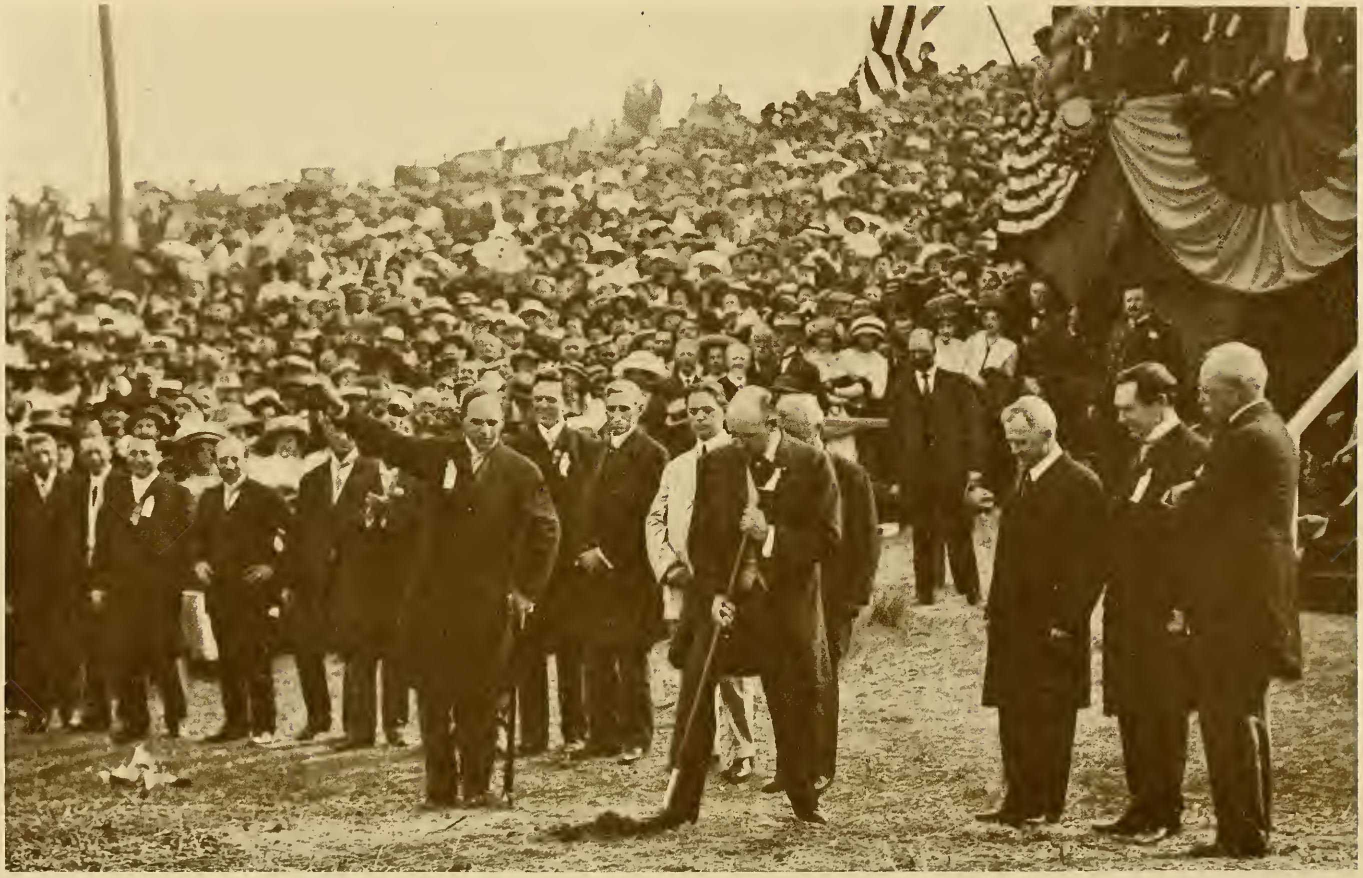
W. H. T.

Both the reading of the President's letter and the unfurling of his flag were characterized by a general impressive silence only to be followed by a tremendous outburst of cheers and applause which were as gratifying as they were complimentary.

The exposition itself promises to be one of the most spectacular and artistic celebrated in this country. The city of San Diego, 500 miles south of San Francisco, has raised two and a half millions of dollars for the purpose of promoting this ambitious project, and if the celebration of the ground-breaking ceremonies may be regarded as a criterion of San Diego's ability to carry out its plans, then indeed will there be opened to the world an exposition which will be picturesque, interesting, and educational.

Behind this movement are men of ability and energy, and to their untiring activities and painstaking efforts is attributable the successful accomplishment of the program of the four-day carnival. The unique idea of holding an exposition for one whole year originated with Col. D. C. Collier, the man who has been selected as director general of the exposition. The President is U. S. Grant, jr., oldest son of the great soldier and former President of the United States. The first vice president is John D. Spreckels, one of California's most prominent citizens. The exploitation and publicity department is under the management of Joseph W. Sefton, jr., who was also acting director general during the carnival. Levi G. Monroe, the secretary, has had considerable experience in exposition work and is possessed of a genius for organization. Cooperating with this energetic executive staff are allied the country's foremost landscape artist, a leading authority on Spanish-colonial architecture, and an experienced director of works. These men will superintend the actual designing and building of the exposition and its displays.

The city of San Diego is appropriately adapted for such an exposition by reason of its location, it being the first port of call on the Pacific coast of the United States north of the Panama Canal, and possessing romantic and historical setting. It was at San Diego that all history of California began. Here landed the first of the Spanish



JOHN BARRETT TURNING THE FIRST SOD OF EARTH AT THE GROUND-BREAKING CEREMONIES OF THE PANAMA-CALIFORNIA EXPOSITION, BALBOA PARK, JULY 19, 1911.

Laying the corner stone to the first exposition building marked the opening exercises of the San Diego carnival. Addresses were delivered by President Taft's representative, John Barrett, Director General of the Pan American Union; J. W. Sefton, jr., acting director general of the exposition, and representatives of the mayor of San Diego and the governor of California. The unfurling of the flag of the President of the United States, together with the national emblems of the American Republics, was one of the most inspiring incidents of the program.

navigators in the sixteenth century, Cabrillo, in 1542. Sixty years later came Viscaino. In the eighteenth century came the spiritual conquests of Junipero Serra and the Franciscan fathers associated with him. The history of this place is crowded with fascination, picturesque romance, and tradition. To perpetuate these traditions and the flavor of the older days of the State, the permanent buildings that will be erected to house the exposition will form the Mission City. All of the edifices will be of the Spanish-colonial type of architecture—the type which the Mission fathers aimed at in the buildings of the 21 missions of California.

As the ground breaking and laying of the corner stone for the first building marked the primal official acts directly bearing upon the exposition, they took place on the first day of the four (July 19–22) which had been set aside for the celebration of the San Diego carnival. The crowds which turned out to witness the exercises were enormous, numbering in their midst many distinguished out-of-town officials and guests. All thoroughly enjoyed the arrangements of the day, which were carried off with admirable precision. Promptly at 2 on the afternoon of July 19 a brilliant military and naval parade escorted the speakers of the day, the officials of the exposition, special delegates, and guests to Balboa Park. Here U. S. Grant, jr., president of the Panama-California Exposition, called the assemblage to order.

The afternoon's program was now in order. An invocation was delivered by the Rev. Edwin F. Hallenbeck, of the First Presbyterian Church, followed by a song especially written for the occasion and delightfully rendered by the Harmony Club of San Diego. The address of welcome on behalf of the management was next delivered by J. W. Sefton, jr., the acting director general. Speeches were then made in behalf of the city and State by representatives of the mayor and governor. The Director General of the Pan American Union, John Barrett, was next presented as the personal representative of President Taft, and he read the sincerely affectionate letter touching on his regard for the people of San Diego For a moment the multitude seemed moved at the President's reference to his interest in the city of San Diego, and then arose a mighty ovation, evidencing clearly the respect and admiration which was felt for the Nation's head.

The actual breaking of ground next occurred. Mr. Sefton first loosened the earth with a silver pick. He then handed a silver spade to Mr. Barrett, who turned the first sod. The spade was then passed to Mr. Grant, Acting Mayor Woods, Mr. Gates, representing Governor Johnson, Mr. Spreckels, and others. Each turned a spadeful of earth, and the spade was finally passed back to Mr. Sefton, who turned the last sod.

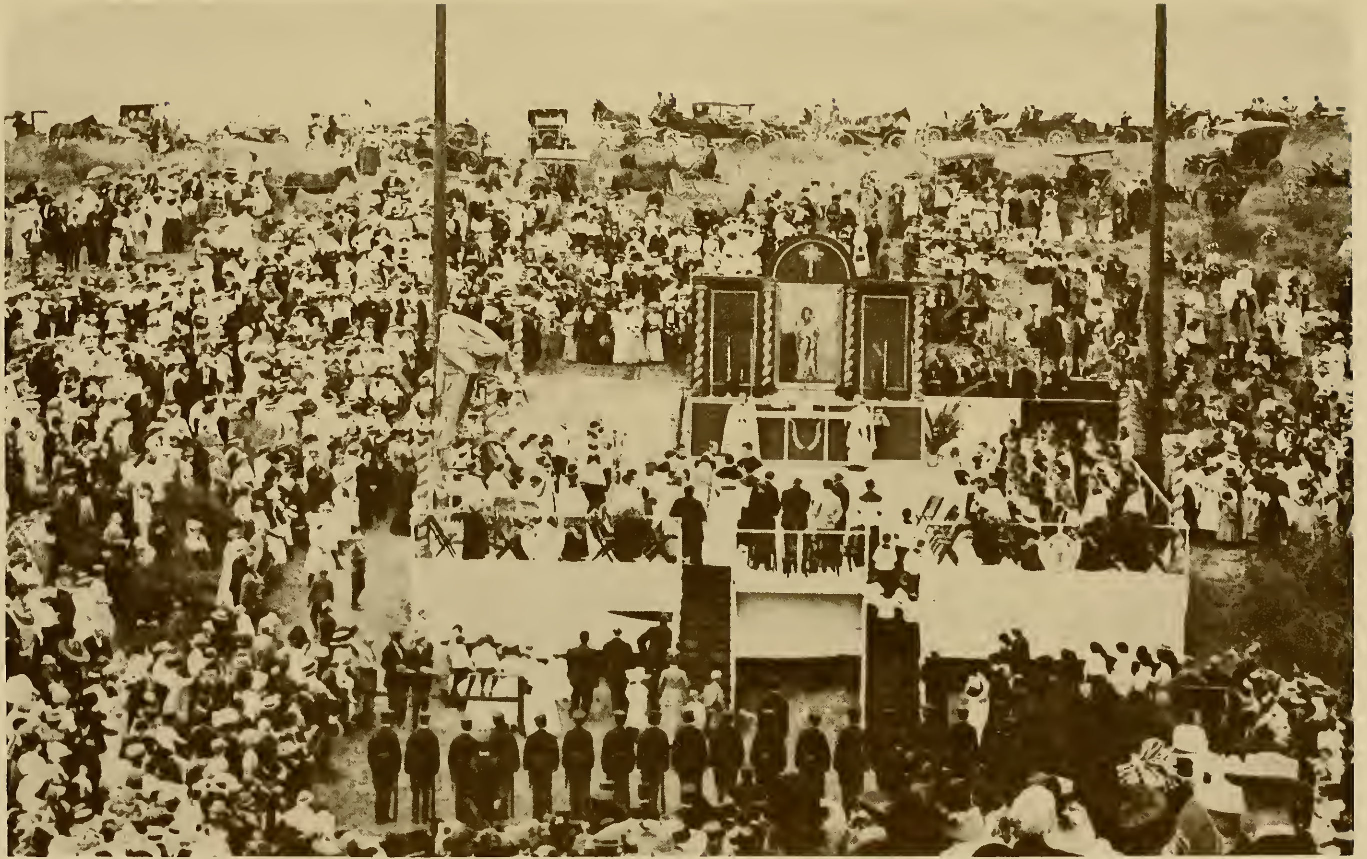
Mr. Barrett then again addressed the gathering, this time in behalf of the Latin-American Republics and in his official capacity as Director General of the Pan-American Union.

At the conclusion of his address there was introduced an inspiring and stirring feature, a remarkable tribute to the Pan American countries, and a notable expression of the mutual friendship and sympathy existing between the Americas. It was the unfurling of the flags of the nations. Slowly, one after another, the national emblems of each of the Central and South American countries, the 20 sister Republics to the south, were thrown to the breezes. Cheer upon cheer greeted each flag as it proudly waved in the air, and the climax was reached when, to the strains of the Star-Spangled Banner, the Stars and Stripes dropped from the wire and took her place alongside the others.

Other addresses were made by Hon. P. E. Woods, Acting Mayor; Hon. Lee C. Gates, representing Governor Johnson, of California; Governor R. E. Sloan, of Arizona; Hon. C. C. Moore, president of the Panama-Pacific International Exposition, of San Francisco; Hon. Will H. Parry, representative of the Governor of Washington.

The morning of Wednesday was given over to a notable military mass, celebrated in the same spirit and with the same ceremonies that marked the founding of San Diego 142 years ago. On the altar the very same ornaments were used that Junipero Serra used—the same great brass crucifix, the same chalice elevated to the same blue sky, and with the same words of the same prayer. The only difference was that which time and the mighty march of progress had made. On the hillsides, where had gathered only a handful of naked savages in 1769, there was gathered a vast multitude of people of every denomination.

This solemn pontifical military field mass was a most colorful, striking, and spectacular event. The magnificent altar, a replica of an ancient structure in Loreto, Mexico, was set in an amphitheater with the blue sky for its dome. Leading the procession to the altar were the acolytes, in purple and white satin, bearing golden crosses; two companies of Coast Artillery with drawn swords followed; then a squadron of outriders clad in boleros and sombreros. Directly behind were John Barrett and Joseph W. Sefton, representing, respectively, the President of the United States and the director general of the exposition. Following came the brown-robed, sandaled Franciscans from Santa Barbara mission, the one gray fortress that, through wreck and ruin and spoliation, never surrendered; the friars from ancient San Luis Rey, others from Los Angeles, San Gabriel, and far-flung outposts of the Sierra. In sharp contrast to the monks appeared Bishop Conaty in his gorgeous robes of purple and gold, followed by the monsignori in scarlet, and the secular priests, to the number of 100, in white surplices.

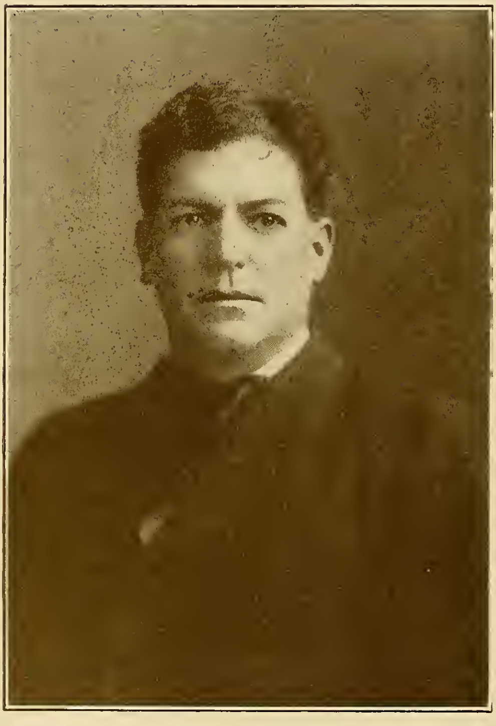


SPECTACULAR MILITARY MASS, CELEBRATED ON THE MORNING OF THE GROUND-BREAKING EXERCISES, JULY 19, 1911.

A replica of the altar of the Franciscan Church in the City of Mexico, erected in Balboa Park on almost the identical spot where Junipero Serra performed a like ceremony in 1769. The Right Rev. Bishop Conaty performed the same military mass Wednesday morning, consecrating the ground to the uses and purposes of the Panama-California Exposition. It was the first performance of this mass in the United States since 1769, and was attended by high dignitaries of the church. John Barrett, special representative of President Taft and Director General of the Pan American Union, and J. W. Sefton, jr., acting director general of the exposition, were accorded the unusual honor of seats within the sanctuary.

Franciscan priests were in full charge, the celebrant being Father Benedict, of St. Louis. Bishop Conaty occupied a purple throne, and was assisted by several clergymen. Within the sanctuary, a most unusual honor, sat Director General Barrett, Joseph W. Sefton, and Acting Mayor Woods. An eloquent address was delivered by the Bishop of Monterey and Los Angeles, Bishop Conaty, who paid a glowing tribute to President Taft, referring to him as "Our noble-hearted and well-beloved President," a remark which evoked much applause.

The second day of the carnival, Thursday, July 20, witnessed a historical pageant of remarkable splendor and brilliancy. Conceived in the soul of a poet and wrought to completion by a master artist, the scene which was viewed by nearly 50,000 people will not soon be forgotten. With 10 square miles of open territory, the 10 floats with their 800 outriders, torchbearers, and actors, had ample space to do justice to their rôles. The pageant depicted the march of time; it carried the spectator from the mists of forgotten ages along the fateful pathway of the centuries down to the present day with a glimpse of the vistas of to-morrow. To Edwin H. Clough, the poet, and to Henry C. Kabierske, the artist, let the praise be given. Mr. Kabierske personally superintended the details of the wonderful floats displayed during the festivities.


COL. D. C. COLLIER, DIRECTOR GENERAL OF THE PANAMA-CALIFORNIA EXPOSITION, TO BE HELD AT SAN DIEGO, CALIFORNIA, DURING THE ENTIRE YEAR OF 1915.

As the history of San Diego is closely entwined with that of early Mexico, the events depicted were naturally of particular interest to all familiar with the romantic and picturesque history of Latin America. The old Aztec priests sacrificing to the god of war, the taking possession of the Pacific Ocean by Balboa, the fall of the ancient Aztec dynasties and the rise of Christian rule, with Montezuma and Cortez as central figures, were pictured on the first three floats, and served to create a historical background and setting for the imagination to draw upon in viewing the succeeding tableaux. Then came the portrayal of Cortez directing Juan Rodriguez Cabrillo to sail northward in search of Cibola, immediately followed by the caravel of Cabrillo, the little ship with its joyous sails fluttering, passing into San Diego's harbor. The era of the Brown Padres next appeared, when the old California missions along the sunny stretches from San Diego to Sonoma were built. But the spectacle which inspired enthusiasm through the miles of spectators who lined the streets of the city was the tableau of the raising of the first American flag in San Diego, which was, as some authorities contend, the first American flag to be raised on the Pacific coast. A fantastic float was the representation of Neptune presiding at the wedding of the Atlantic and Pacific Oceans, thus signifying the completion of the Panama Canal.

The last and most elaborate float in the pageant told the story of San Diego from its first discovery by Cabrillo down to the present day, including the intermediate epoch of the founding of the first mission by the Franciscans. In its fascinating beauty of light and color the craft was nothing less than a masterpiece of stage ingenuity.

On Thursday evening the citizens of San Diego tendered a sumptuous banquet in honor of Mr. Barrett at the Grant Hotel, which was attended by a representative gathering of distinguished guests and visitors to the celebration. It is especially gratifying to note the intense interest displayed in the remarks of Mr. Barrett, on that occasion, as evidenced by the following quotation from the Los Angeles Daily Times of Saturday morning, July 22:

> The business men here are still discussing the banquet of last night. John Barrett's speech on that occasion is now taken to have given a deeper and more special message to San Diego than was understood at the moment. The President's representative laid deep emphasis in his remarks on the special opportunity which this city can make use of to capture an enormous trade from the Central and South American Republics lying along the west coast from Mexico to the Straits of Magellan. These are the particular words spoken by Mr. Barrett that San Diego is carefully turning over to-day:
>
> "I want to see San Diego known and loved and visited by the people of every port from here south to Valparaiso. It is no use for you to try to compete with Portland or Seattle or San Francisco in their own particular fields. Those fields belong to them, and you can not take them away. But God Himself ordained that you should open the pathway to Latin America.
>
> "Let San Diego, through her chamber of commerce, communicate with all the chambers of commerce of all the ports along the west coast of Latin America. Get to work on these lines. Let them feel that you welcome them to San Diego and in the development of your commerce with them let them know that you do not want them merely to buy from you, but that you want them also to sell to you and to get advantages from you as well. You will be surprised at the spirit of reciprocity that will be shown."

Friday, the third day of the celebration, was dedicated to the commerce and present-hour progress in the industries. Some 50 floats, representing the various manufacturing and mercantile institutions, surprised the stranger with the extent to which the city had advanced along these lines within the past few years. In the afternoon the Queen of the Carnival, whose coronation occurred in great state and splendor on Wednesday evening, tendered a public reception in the luxuriant palm garden of the U. S. Grant Hotel, and for three hours there was a steady throng of visitors around the throne.

QUEEN OF THE CARNIVAL ON HER FLORAL THRONE.

An enjoyable feature of the celebration was the crowning of Miss Helene Richards as Queen Ramona and the public reception to her "loyal subjects" in the spacious palm gardens of the U. S. Grant Hotel. On the left are the Matrons of Honor, Mrs. Lyman J. Gage, wife of former Secretary of the Treasury and Mrs. J. E. Wadham, wife of the mayor of San Diego.

In private life, Queen Ramona is Miss Helene Richards, one of San Diego's charming young women. Society night was also scheduled for this day, and the ball which was held in the Grant Hotel is considered by many the most brilliant social event the city has ever witnessed.

However, it was on Saturday, July 22, the last day of the festivities, that the climax of the celebration occurred in the form of a mission parade, a feature of the celebration which alone cost nearly $10,000. An idea of the magnitude of this undertaking may be gleaned from the statement that this was the first time in the history of the United States that a church pageant had been shown, and the first time in 200 years that the world had seen anything of this kind. Replicas of the 21 missions of the State were exhibited, and accompanying each float was a tableau showing the principal event in the history of that particular mission. More than 1,000 characters participated in this event.

During all the days of the carnival there were many special features in the way of sports both on land and water, automobile races, motor-cycle races, ocean race for the exposition gold cup, and spectacular and thrilling aviation exhibitions. Nor would a description of the celebration be complete without a passing note on the dozens of brass bands that furnished music during the entire period of the festivities. And chief among these was the band from Ensenada, Mexico, attached to the eighth battalion of the Mexican army. They were the delight of San Diego, with their delightfully rendered selections from the grand operas, and their masterful interpretations of native ballads and melodies.

THE SAN DIEGO MISSION, FOUNDED JULY 16, 1769.

One of the floats in the Mission Parade held on the final day of the ground-breaking exercises, July 22, 1911. This church pageant was the first of such magnitude and brilliancy that the world has seen in 200 years.

Unique among the novel plans of this exposition is the arrangement of the management to hold a celebration each year until 1915. The first epoch which was the basis of the festivities this year, covered the period from the discovery of the Pacific Ocean by Balboa, with the principal events which transpired until the coming of the Gringo and the raising of the American flag. For 1912 it is planned to depict the story from the occupation of the land by the Gringos to the coming of the Argonauts. The following year will be shown the growth of the State in the Union and its civic progress to the time of the celebration, and the year 1914 will witness the events that led California into its onward march to the ranks of the great States of the Union and of the possibilities in irrigation, commerce, and trade.

As the main portion of this article was prepared for the press before the director general returned to Washington, it was possible not to include in the preceding text an expression by him of the deep appreciation of the courtesies which were shown him by everybody in San Diego during his stay in that city as the representative of President Taft and in his capacity as director general of the Pan American Union. He therefore wishes to take advantage of this supplementary paragraph to specifically thank the following persons for their kindnesses: U. S. Grant, jr., president of the Panama-California Exposition; Joseph W. Sefton, jr., acting director general in the absence of Director General D. C. Collier; Rufus Choate, secretary of the Chamber of Commerce; John D. Spreckles, vice president of the exposition; William Clayton, manager of the Spreckles interests; Levi G. Monroe, secretary of the exposition; Bishop Conaty; Hon. Lee C. Gates, representing Gov. Johnson, of California; Acting Mayor P. E. Woods; G. A. Davidson, vice president of the exposition; S. I. Fox, president of the Merchants' Association; Lyman T. Gage, ex-Secretary of the Treasury; Geo. H. Ballou; John F. Forward, jr., president of the Chamber of Commerce; J. H. Holmes, manager U. S. Grant Hotel; I. G. Lewis, of the publicity department of the exposition; Capt. Reed, U. S. S. *McCullough;* Louis S. Aubrey, State mineralogist; George Burnham; Commander Ellis of the torpedo fleet; John S. McGroarty, newspaper correspondent; James MacMullen, of the San Diego Union; W. W. Whitney; Col. Fred Jewell; L. Blochman; and Henry Kabierske.

THE BEGINNINGS OF PAN AMERICANISM

FRANCISCO MIRANDA was an enthusiastic Pan American. On perusing his correspondence one is struck with the constant repetition of the phrase "nuestras Americas"—Our Americas—especially when he is planning concerted action with those countries distant from his native Venezuela, as the Argentine and Chile. The differences in language were no barrier to his broad ideas; he urged and longed for the cooperation of Brazil and Haiti in his far-seeing plans. Miranda received a Pan American education. He told President Ezra Stiles, of Yale, that he studied law a year or more at a college in the city of Mexico after his education in Venezuela, and he attended lectures at Yale University in July, 1784. So far as can be ascertained, he was the first South American to study at a United States university. It was John C. Calhoun, Yale, 1802, who raised the appropriation for provisions for Venezuela after the earthquake of March 26, 1812, from $30,000 to $50,000; and Hiram Bingham, Yale, 1898, has made the "Venezuelan Wars of Independence" live again for us in his vivid narrative. Many Yale graduates have represented the United States in Venezuela, and Yale is one of the few universities in the United States where courses of study are offered in South American history and resources. In 1795 commis-

FRANCISCO MIRANDA.

Gen. Miranda occupies a place of unusual distinction and glory in the pages of Latin-American history. A martyr to the cause of liberty, he sacrificed his noble life to the triumph of his national ideals. Miranda participated in the independence movements of the Americas—both North America and South America.

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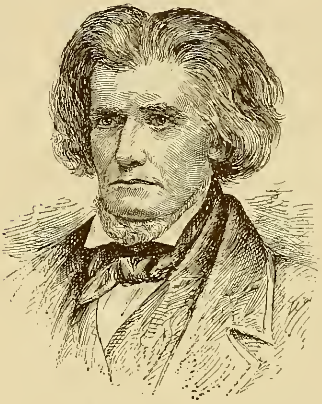
[1] By Charles Lyon Chandler.

sioners from Mexico met Miranda in Paris and held what was the prototype of all succeeding Pan American congresses. As a result of their conferences a remarkable paper was submitted to the British Government advocating the cooperation of Great Britain and the United States in a movement to free Latin America. The ninth and tenth articles of this document relate to the project of an alliance between Latin America and the United States, breathing the spirit of mutual interest and aspirations out of which grew the Pan American Union. Alexander Hamilton's letter to Miranda of August 22, 1798, reads, in part, with reference to Miranda's efforts toward obtaining South American independence:

> The sentiments I entertain with regard to that object have long since been in your knowledge; * * * it was my wish that matters had been ripened for a cooperation in the course of this fall, on the part of this country: the winter, however, may mature the project, and an effective cooperation by the United States may take place. In this case I will be happy, in my official station, to be an instrument of so good a work.



J. C. Calhoun

(Photo from National Cyclopedia of American Biography.)

Calhoun always displayed an intense interest in Latin-American affairs. It was through his efforts that a substantial sum was appropriated by the United States Congress for the relief of the sufferers of the Venezuelan earthquake in 1812.

Miranda wrote to Gen. Henry Knox, the first Secretary of War of the United States, on 22 Ventôse, year 3 (Mar. 14, 1796):

> I take the pen only to tell you that I live and that my sentiments for our dear Columbia, as well as for all my friends in that part of the world, have not changed in the least.

One of the most practical of these early manifestations of Pan Americanism is the constant invocation by the Latin-American countries of the example and guidance of the United States, whose rôle in the struggle for Latin-American independence is a noble example of disinterestedness. As early as 1785 we find in the "Political Herald and Review," of London, in an article on South America:

> The flame which was kindled in North America, as was foreseen, has made its way into the American dominions of Spain. The example of North America is the great subject of discourse and the grand object of imitation.

We know that the War of Independence of the United States was actively discussed in Caracas and Bogotá in 1792, and we have positive proof that it was one of the causes that inspired the Venezuelan uprisings of 1797 and 1798.

Juan Pablo Vizcardo y Guzman, a native of Arequipa, in Peru, and a Jesuit priest, on his death, in London, in 1798, left with the United States minister there, Rufus King, a remarkable paper urging South American independence, in which he says of his countrymen:

> The recent acquisition of independence by their neighbors in North America has made the deepest impression on them.

Counselor Emmet, in speaking to a New York audience of Miranda in 1806, states: "From your own altar of liberty he caught the holy flame," and Dean Gregorio Funes (May 25, 1749–Jan. 10, 1829), the famous Argentine patriot, ecclesiastic, writes about the year 1819:

> La Revolutión de Norte-America, y la reciente de Francia, habrán resuscitado entre nos otros los derechos naturales del hombre.
>
> The North American Revolution, and the recent French one, revived among us the natural rights of man.

The contemporary press of the United States was not merely filled with current and carefully prepared information regarding South America, but also breathes a broad spirit of Pan Americanism.

Thus Niles' Register, September 30, 1815:

> Who is there in the United States that would not be benefited by the exaltation of Mexico to the rank of a sovereign and independent State? The advancement of republican principles, as well as of the commercial interests of our country, are alike engaged on the side of the patriots of South America, whose success would open a source of trade to us more important than any we have with the Old World. It is impossible to divest the people (of the United States) of their wishes for the prosperity of the patriots.

ALEXANDER HAMILTON.

Notable in the history of America's struggle for liberty and independence is the continued invocation by Latin-American countries of the example and guidance of the United States. Several interesting communications were exchanged between Miranda and Alexander Hamilton on the urging of the moral influence of the United States in the South American movement for freedom.

And the National Intelligencer, in 1812 (quoted in Niles' Register, Vol. II, p. 327):

> The following account of the reception of our consul general to Chile can not but be gratifying to everyone who duly appreciates the value of the good understanding with nations with whom our relations are likely to be so interesting as with the infant States of South America.

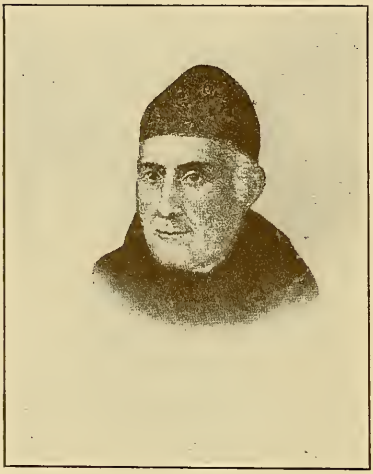
It may not be uninteresting to tell something of this reception. Incidentally, our first minister to Brazil, Thomas Sumter, had been received at Petropolis June 7, 1810, and William Gilchrist Miller, vice consul of the United States at Buenos Aires, was the first foreign representative received by the Argentine Government, on November 22, 1811. Joel Roberts Poinsett, of South Carolina, was appointed consul general to Buenos Aires, Perú and Chile on April 30, 1811.

The President of Chile said on receiving Poinsett, February 24, 1812:

> That power (the United States) attracts all our attentions and our attachment. You may safely assure it of the sincerity of our friendly sentiments.

To which Poinsett replied:

> The Americans of the north generally take the greatest interest in the success of these countries, and ardently wish for the prosperity and happiness of their brothers to the south. I will make known to the Government of the United States the friendly sentiments of your excellency, and I felicitate myself on having been the first who had the honorable charge of establishing relations between two generous nations, who ought to consider themselves as friends and natural allies.



DEAN GREGORIO FUNES.

Noted Argentine patriot and ecclesiastic, whose spirit for liberty was kindled by the United States movement for freedom.

Extract from President Madison's message to Congress of November 5, 1811:

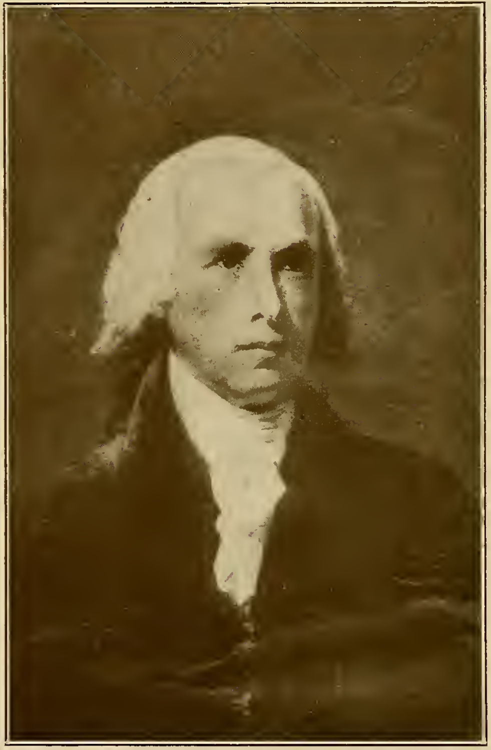
> In contemplating the scenes which distinguish this momentous epoch, and estimating their claims to our attention, it is impossible to overlook those developing themselves among the great communities which occupy the southern portion of our Hemisphere, and extend into our neighborhood. An enlarged philanthropy and an enlightened forecast concur in imposing on the national councils an obligation to take a deep interest in their destinies, to cherish reciprocal sentiments of good will, to regard the progress of events, and not to be unprepared for whatever order of things may be ultimately established.

This was a message sent to a special session of Congress, that was called to discuss matters connected with the impending war with England; and it is all the more noteworthy, as signifying the interest felt by one of the greatest United States statesmen in the destinies of our South American neighbors at this moment of national stress.

On November 12, 1811, "such portion of the President's message as referred to South America" was referred to a committee of the

House of Representatives consisting of Samuel L. Mitchill, of New York; William Blackledge, of North Carolina; William W. Bibb, of Georgia; Epaphroditus Champion, of Connecticut; William Butler, of South Carolina; Samuel Taggart, of Massachusetts, and Samuel Shaw, of Vermont.

As it was Mitchill who was the first, so far as can be ascertained, to offer in a foreign legislative body a resolution of sympathy with the struggling Latin-American countries, some account of his life may be of interest. Samuel Latham Mitchill was born in North Hempstead, Long Island, August 20, 1764, and died in New York City on September 7, 1831. Educated at the University of Edinburgh, few Members of Congress have won permanent fame in as many branches of useful public service as he. His chemical, geological, and scientific studies were practical as well as theoretical; he was undoubtedly the originator of the idea of harnessing the water power of Niagara Falls, and he accompanied Fulton on the first voyage of the *Clermont*. He founded the first medical journal in the United States, and was often alluded to as the "Nestor of American Science."



JAMES MADISON.

Memorable in Pan American history is the message of President Madison to the special session of Congress in 1811. Though the United States was itself disturbed by the stress of an impending war, Madison, nevertheless, took occasion to direct attention, interest, and sympathy to the contemporaneous struggles of the South American Republics.

It is extremely probable that he met Miranda during the latter's sojourn in New York City, and possible that he saw Bolivar on his visit there in 1806.

His memorable resolution, offered on December 10, 1811, was as follows:

Whereas several of the American Spanish Provinces have represented to the United States that it has been found expedient for them to associate and form federal govern-

> ments upon the elective and representative plan, and to declare themselves free and independent: Therefore be it
>
> *Resolved by the Senate and House of Representatives of the United States of America in Congress assembled*, That they behold, with friendly interest, the establishment of independent sovereignties by the Spanish Provinces in America, consequent upon the actual state of the monarchy to which they belong; that as neighbors and inhabitants of the same hemisphere, the United States feel great solicitude for their welfare; and that, when these Provinces shall have attained the condition of nations, by the just exercise of their rights, the Senate and House will unite with the Executive in establishing with them, as sovereign and independent States, such amicable relations and commercial intercourse as may require their legislative authority.

But the Pan Americanism of those days was not confined to speeches and resolutions. The grandson of a President of the United States accompanied Miranda to Venezuela in 1806 and took an active part in that expedition.

Sam L. Mitchill

(Photo from National Cyclopedia of American Biography.)

His resolution of sympathy with the struggling Latin-American countries, introduced in the United States Congress in 1811, is regarded as the first of its nature to have ever been offered in a foreign legislative body. Biographers consider this noted statesman, scientist, and journalist one of the most gifted and versatile men that New York has ever produced.

As soon as news reached the United States of the terrible earthquake at Caracas, Venezuela, of March 26, 1812, the sympathies of the people were aroused and were manifested in various ways, of which the prompt action by Congress is an example. On May 4, 1812, a law was passed authorizing the President to expend $50,000 to purchase a quantity of provisions and present them to the Government of Venezuela in the name of the United States. Alexander Scott was intrusted with this duty; he arrived at La Guaira on June 22, 1812, the 5 vessels in which the flour and other provisions were sent coming soon afterwards. So far as can be ascertained this was the first congressional appropriation of its kind, and is all the more noteworthy as occurring when the United States was on the brink of war with England, when every penny available was being used for hostile purposes. This sum would probably represent nearly $120,000 now. John C. Calhoun was very active in securing the passage of this bill, having the amount raised from $30,000 to $50,000, thus evidencing the Pan Americanism that characterized his useful life. On June 6, 1812, 17 men, women, and children, escaping from this same earthquake, were hospitably received at New Castle, Delaware.

In the year 1816 a book was published in Philadelphia, by Manuel Torres, entitled "An Exposition of the Commerce of Spanish America, With Some Observations Upon Its Importance to the United States." It might have been published yesterday by the Pan American Union. Opening it at random, one would wonder whether it is John Barrett or Manuel Torres who is speaking. Its tone may be shown from the following extracts:

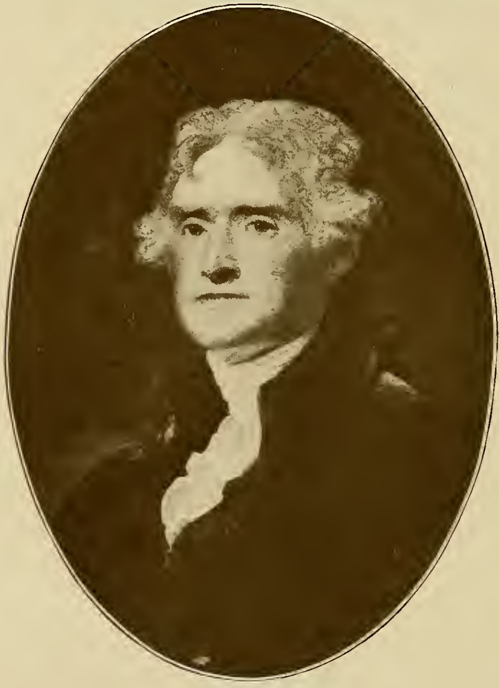
> We can not doubt that the spirit of enterprise, which has hitherto distinguished the American merchant in so remarkable a manner, will be conspicuous in that part of the New World, under the aid and protection of the best of Governments, and a people, whose penetration and vigilance for the welfare of the country can not fail to foresee that an intercourse of friendship and interest between the inhabitants of South and North America is absolutely necessary to their safety and prosperity.

In this connection it is interesting to note that New Granada was exporting more than twice as much in 1815 as were the United States in 1775, at the dawn of independence. There never has been a greater Pan American than Thomas Jefferson. He wrote in 1808 to Gov. Claiborne, of the Territory of Orleans, at New Orleans, speaking of Cuba and Mexico:

> We consider their interests and ours as the same, and the object of both must be to exclude all European influence from this hemisphere. (9 Writings of Jefferson, 213.)

He expanded this germ of the Pan American idea 12 years later, when he wrote to a Portuguese minister in Washington, who was about to go to Brazil:

> From conversation with him, I hope he sees, and will promote in his new situation, the advantages of a cordial fraternization among all the American nations, and the importance of their coalescing in an American system of policy totally independent of and unconnected with that of Europe. (7 Jefferson's Works, 1854, p. 168.)



THOMAS JEFFERSON.

United States history is replete with men who have shown their love and interest for Latin America while in the public service. President Jefferson entertained very pronounced ideas on Pan Americanism, and continually urged cordial relationship between the American nations.

Thus we see that Jefferson and his rival Hamilton, however much they might differ on other topics, were united on the broad bases of Pan Americanism. For it is nothing new, this Pan American idea; it is as old as are the new nations themselves.

ANCIENT TEMPLES AND CITIES OF THE NEW WORLD

MITLA

MY first visit to the ruins of Mitla was made in the early eighties.[1] Having been appointed in 1885 to make ethnological and antiquarian researches in the State of Oaxaca, I visited Mitla several times, making prolonged stays on each occasion, and very carefully measuring the principal buildings.

Interesting as all of these ruins are from the strangeness of their architecture and the enormous wealth of mosaic ornament, the greatest interest and the greatest problem which they present to us is the story which they have to tell of the vanished civilization which erected them. All the Yucatan ruins, and indeed all Central American ruins, are found now absolutely buried in great forests. It is difficult, almost to the point of impossibility, in the case of all these ruins to get any general bird's-eye view of them. From the most elevated points all that can be seen are islands of sculptured stone emerging from a veritable ocean of trees. At Mitla, however, conditions are entirely different, as different as the buildings there are from all others, both in their architecture, decoration, and cause of being. It is perhaps more easy to solve, or attempt to solve, the problem of Mitla than of any other group of ruins in Central America. The very name Mitla is a contraction or corruption of the word Mictlan, meaning "The place of death." From its name, then, Mitla is seen to be a burial city. A still more ancient name is Lyobaa, meaning "The center of rest."

The little village of Mitla, on the outskirts of which the ruins are found, is situated some 30 miles to the southeast of Oaxaca. Village and ruins occupy the center of an arid plain or valley, surrounded on all sides by equally arid hills, on the highest summit of which are the well-preserved remains of a great fortress. Its walls are of exceedingly rough construction, and absolutely without ornament of any

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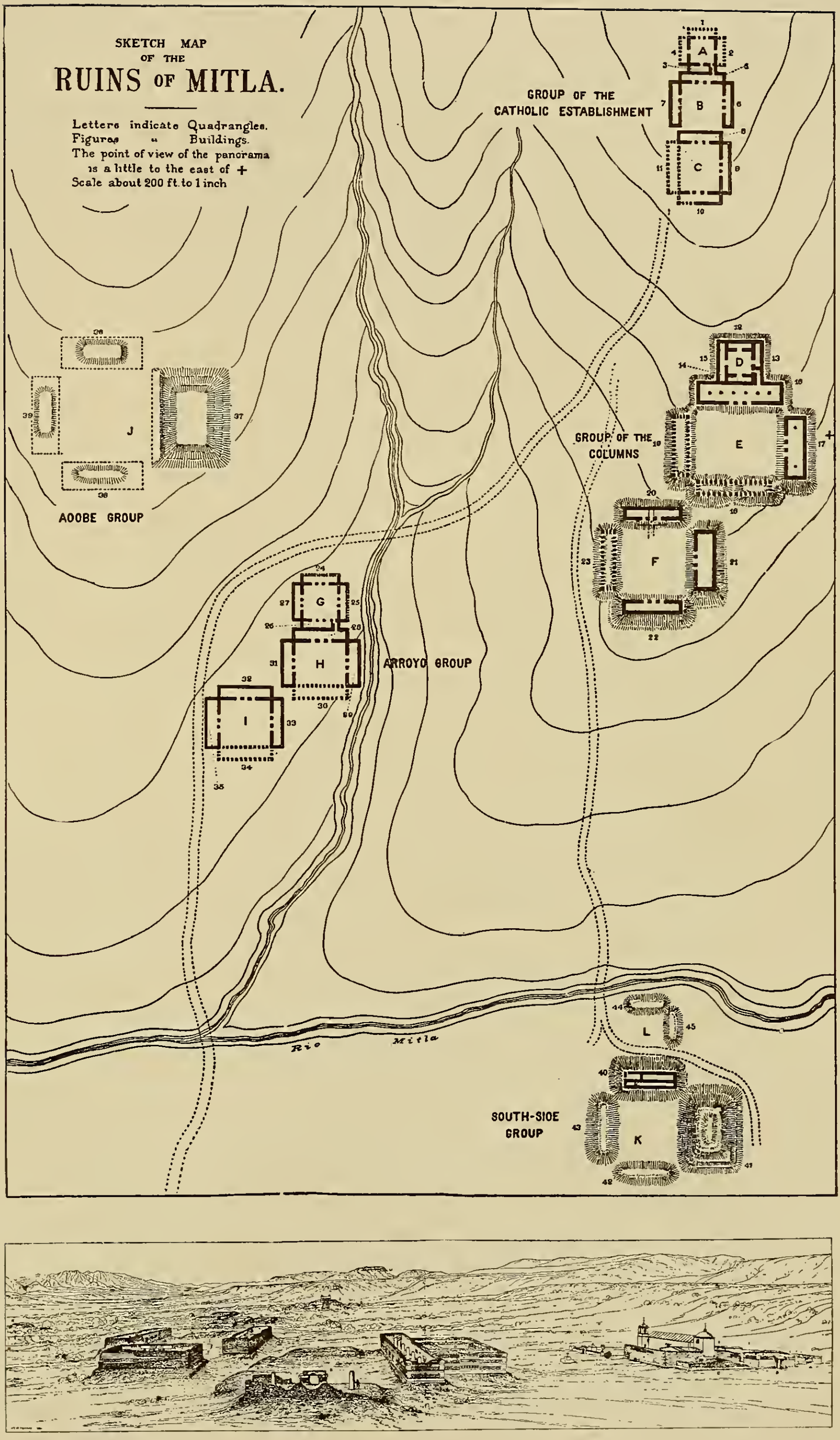
[1] By Louis H. Aymé, consul general of the United States at Lisbon, Portugal.



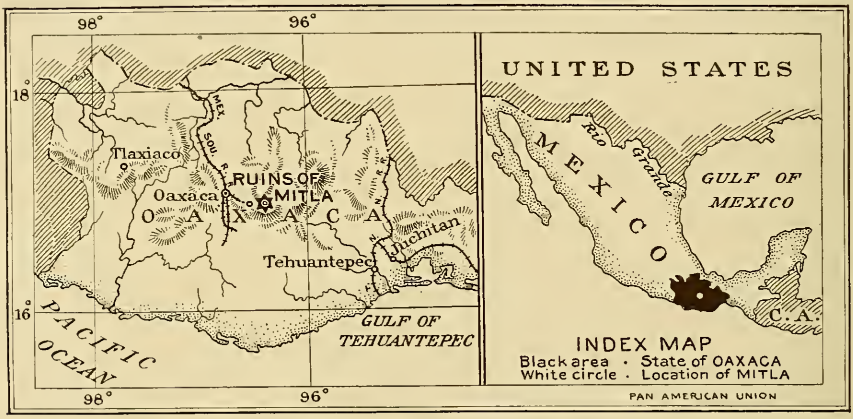
Drawing by Holmes.

SKETCH MAP AND PANORAMA OF THE RUINS OF MITLA.

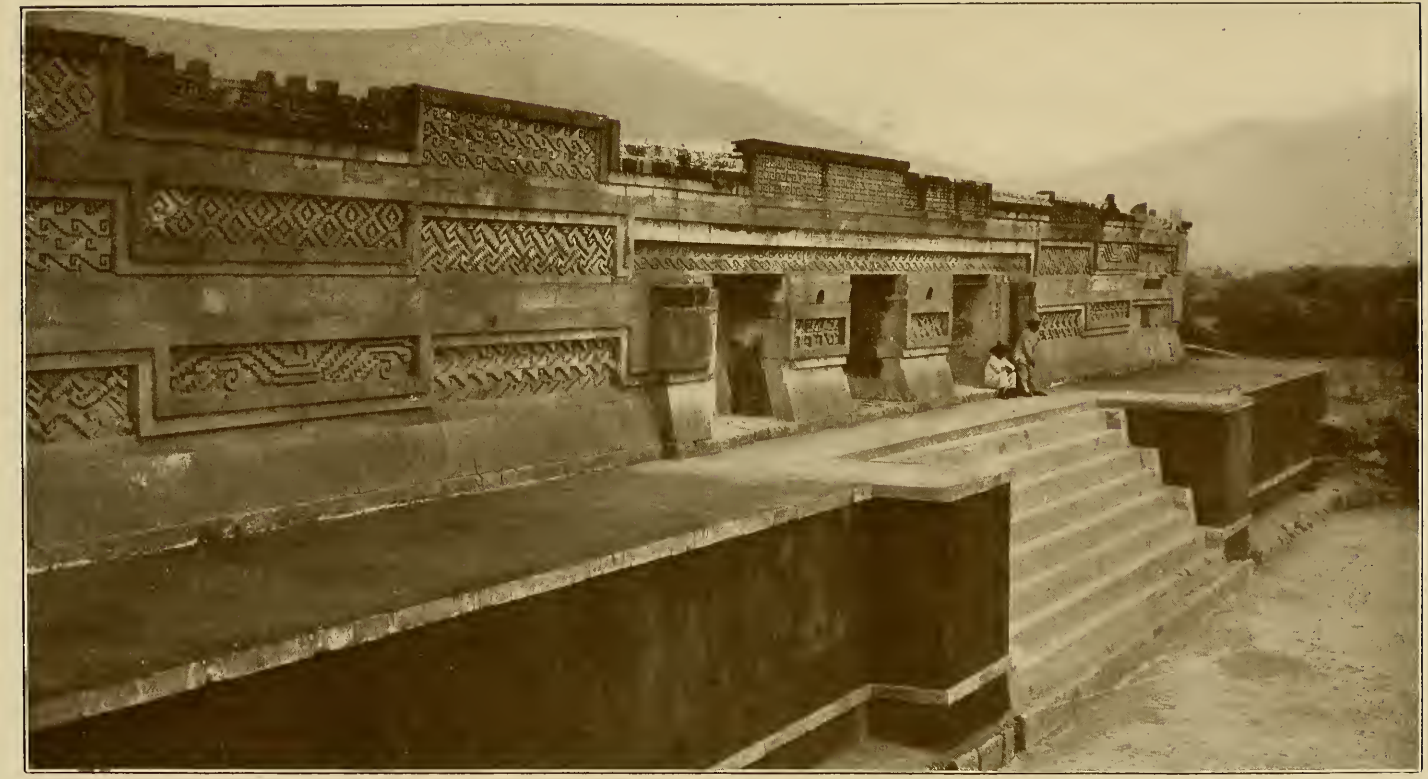
kind. Near the entrances and disposed along the walls are huge heaps of stones, which were evidently to be used in the defense of the fortress.

Nearly in the center of this arid plain five great groups of buildings stand out completely exposed. Many of them are now nearly shapeless mounds and masses of ruins. Two great groups, however, are in comparatively perfect preservation, a third is incorporated with an old church, and a fourth, the great sacrificial mound, is surmounted by the ruins of a very ancient church. Some of these buildings were made of adobe, some of a sort of brick, and the principal buildings entirely of stone masonry.

The limits of this paper will permit me to describe briefly but two of these groups, the group usually known as the Hall or Palace of the Pillars, or northern group, and the next one to it, which I call the south group. Each group of buildings consists of four rectangular buildings, usually elevated on rectangular mounds, and occupying the four sides of an approximate rectangle. The entrance to each building was only on the side facing inward on the rectangle or patio. This disposition of four buildings surrounding a rectangle is not peculiar to Mitla, but may be considered typical of all Central American ceremonial buildings. A capital example is found in the so-called House of the Nuns, or as it should properly be called, the Court of the Sun and Serpent, at Uxmal. There, however, the entrance to the central patio is through an archway contrived in one of the great side buildings. At Mitla, the entrance to the patio was only through the spaces at the corners of the four buildings, and even in the case of the great Hall of the Pillars the entrance to the interior patio is by a curious passageway contrived in one of the angles.



MAP OF MEXICO, SHOWING LOCATION OF THE RUINS OF MITLA IN THE STATE OF OAXACA.



RESTORED FRONT OF THE PALACE OF THE PILLARS, MITLA, MEXICO.

Mitla, "the place of sadness," in the valley of Tlacolula, is 30 miles southeast of the city of Oaxaca, and the site of the most elaborately ornamented ancient ruins in America. There are five groups of these ruins, three of which are in excellent state of preservation. Their distinctive feature is the peculiar mosaic work of pieces of stone, each about 7 inches long by 1 in breadth and 2 in thickness, accurately cut and fitted into the face of the wall, and forming patterns of so complicated a nature as to give these ruins a foremost place among archæological discoveries in the Western Hemisphere.

Reference to the plan of the ruins accompanying this article will more clearly bring out this disposition of the various groups.

A description of the Hall or Palace of Pillars, the northernmost building of the north group, will practically describe all of the buildings throughout the ruins. The Hall of Pillars is a great room 125 feet 2 inches long and 23 feet wide, interior measurements. The present height of the walls is about 12 feet. The thickness of the front wall is 4 feet 6 inches; of the side walls, 3 feet 2 inches. The entrance to this great room is by three doorways, about 7 feet 10 inches wide, about 7 feet apart. These doorways are not in the exact center of the building. From the west corner of the building to the west edge of the west doorway the distance is 47 feet, while from the east corner of the building to the east edge of the east doorway the distance is 49 feet 10 inches. These doorways are composed of three members, two enormous monolithic door jambs, each about 6 feet 10 inches high, 6 feet wide, and about 2 feet thick, surmounted by monolithic lintels nearly 20 feet long, 3 feet wide, and 5 feet thick. The most striking feature of the room is a row of six monolithic columns running lengthwise of the room, but not accurately on the median line nor separated from each other by the same distances. From the north wall to the line of columns the distance is 10 feet 3 inches, and from the south wall to the same line the distance is 9 feet 10 inches. Each of these columns stands 11 feet 1 inch above the floor, which is covered with cement. Their circumference is each 9 feet 6½ inches. They are slightly tapered or rounded at the top, which is perfectly flat. In the north wall, and approximately in the

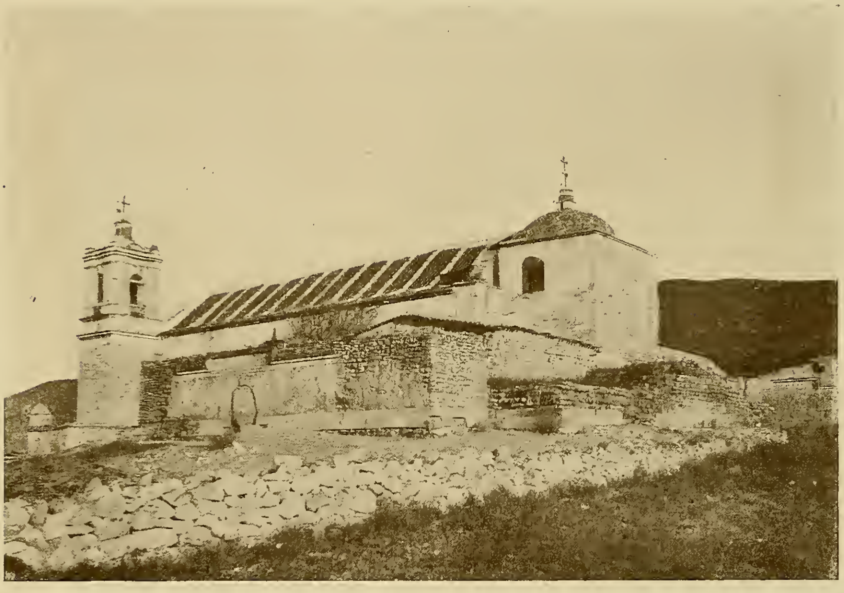
(Photo by Chas. G. Wood.)

CARRIAGE DRIVE OF 30 MILES FROM OAXACA TO MITLA.

A branch road has been contemplated from Oaxaca to Mitla which will enable direct railroad connection with the ruins from various points in Mexico.

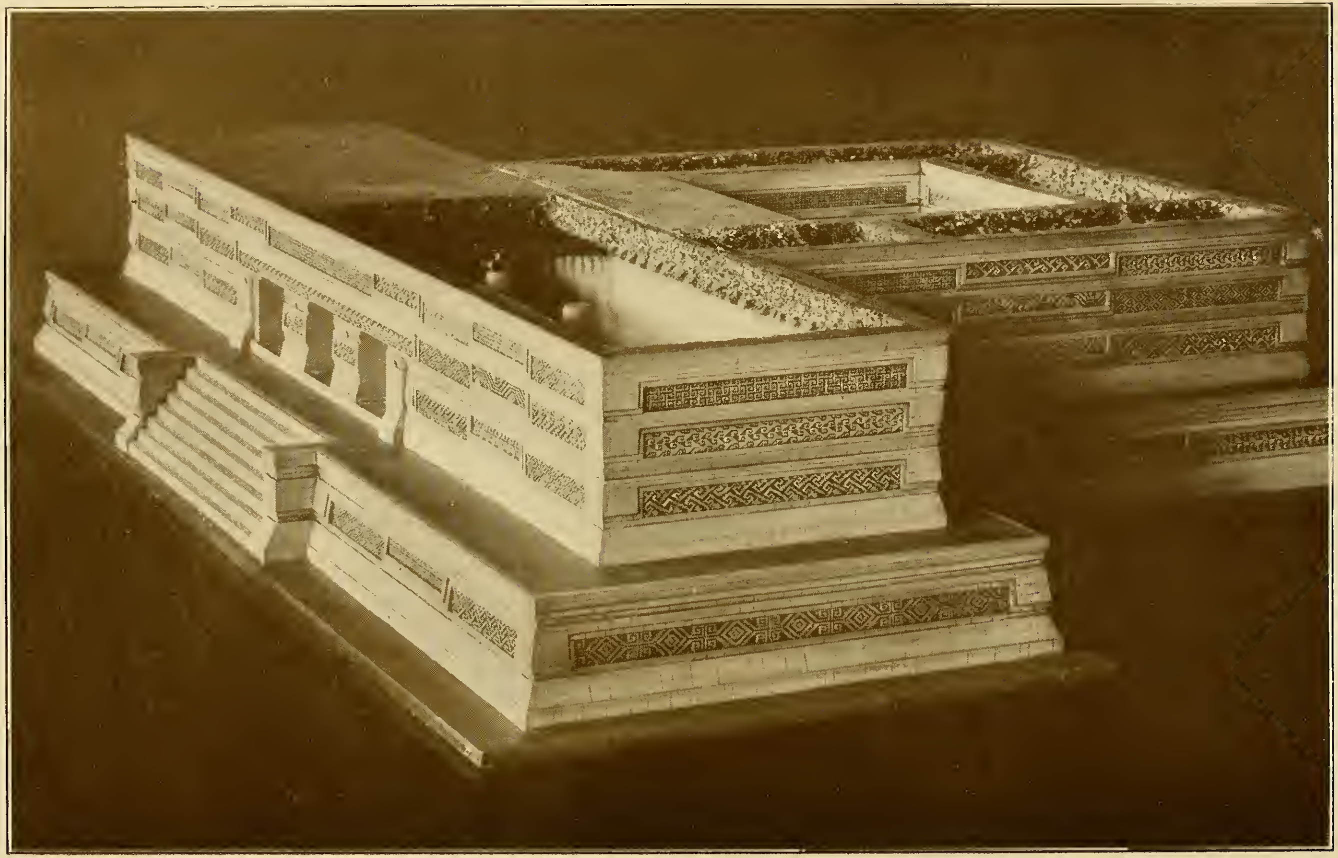
center, is a niche made by four huge stones, no two of which are of same size. The interior walls of the room are perfectly plain. The exterior walls are covered with a rich decoration of panels of mosaic work, surrounded by very large squared and sometimes incised or sculptured stones. The great panels were so built that the upper ones projected beyond the lower, the effect being that when the building was completed it appeared to corbel outward, the roof being much longer than the base line.

Thirty-six feet from the east wall on the north side of the room opens a passageway 5 feet 7½ inches high and only 3 feet 8 inches wide. This passageway runs to the north and then sharply turns at an angle to the west. The long side of the first passageway is 23 feet 8 inches, the short side only 18 feet. The part of the passage running west is only 10 feet 10 inches long, but is nearly 6 feet wide. This passageway gives access to the interior patio, which is 30 feet 10 inches long from north to south and 29 feet 4 inches from east to west. Surrounding this central patio are four rooms. The one on the west runs the whole length of the square and is 57 feet 6 inches long. That on the east side, shortened by the space taken for the passageway, is little more than 36 feet long. The south room is 29 feet 4 inches



MODERN CHURCH BUILT IN AND INCORPORATED WITH A GROUP OF OLD BUILDINGS.

The walls in the courts of the church buildings contain the only mural paintings in the ruins. It was a common practice to finish certain important surfaces, such as those of lintels and door jambs, in elaborate designs of life forms. The space to be decorated was coated with whitish-gray paint well polished down; then the design was worked out in dark red lines and further developed by painting in the background in dark red, thus leaving the figures glowing in the ground color.



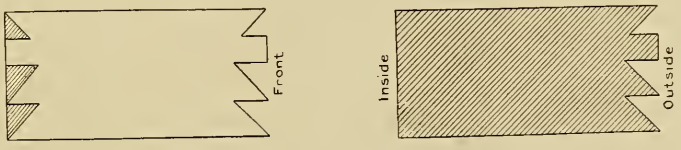
MODEL OF MAIN STRUCTURE AT MITLA, PALACE OF THE PILLARS, IN THE NATIONAL MUSEUM, WASHINGTON, D. C.

This model, but slightly a restoration, presents a view of the notable hall of the columns, together with the interior courtyard, and its surrounding four rooms. This edifice was originally covered with a solid roof. The beautiful embelishments of the exterior walls as well as the mosaic fretworks adorning the courtyard and the other rooms are clearly shown. In the hall of the columns the walls are unadorned. The original palace at Mitla is so well preserved that little hypothetical restoration was required; the paneling of the foundation is restored to agree in style with the three zones of mosaic decorations on the walls. Model constructed under supervision of Prof. W. H. Holmes.

long and the north room 29 feet 5 inches. The north, south, and east rooms are all about the same width, from 8 feet 2 inches to 8 feet 6 inches. The east room, however, is only 6 feet 8 inches wide. The average wall thickness is about 4 feet. All of these rooms of the great Palace of Pillars were originally covered with a solid roof, so they must have been in almost complete darkness. The moment one enters the interior courtyard it is seen that all its walls, and all of the walls of the four rooms surrounding it, are covered with huge panels of the typical mosaic work of Mitla.

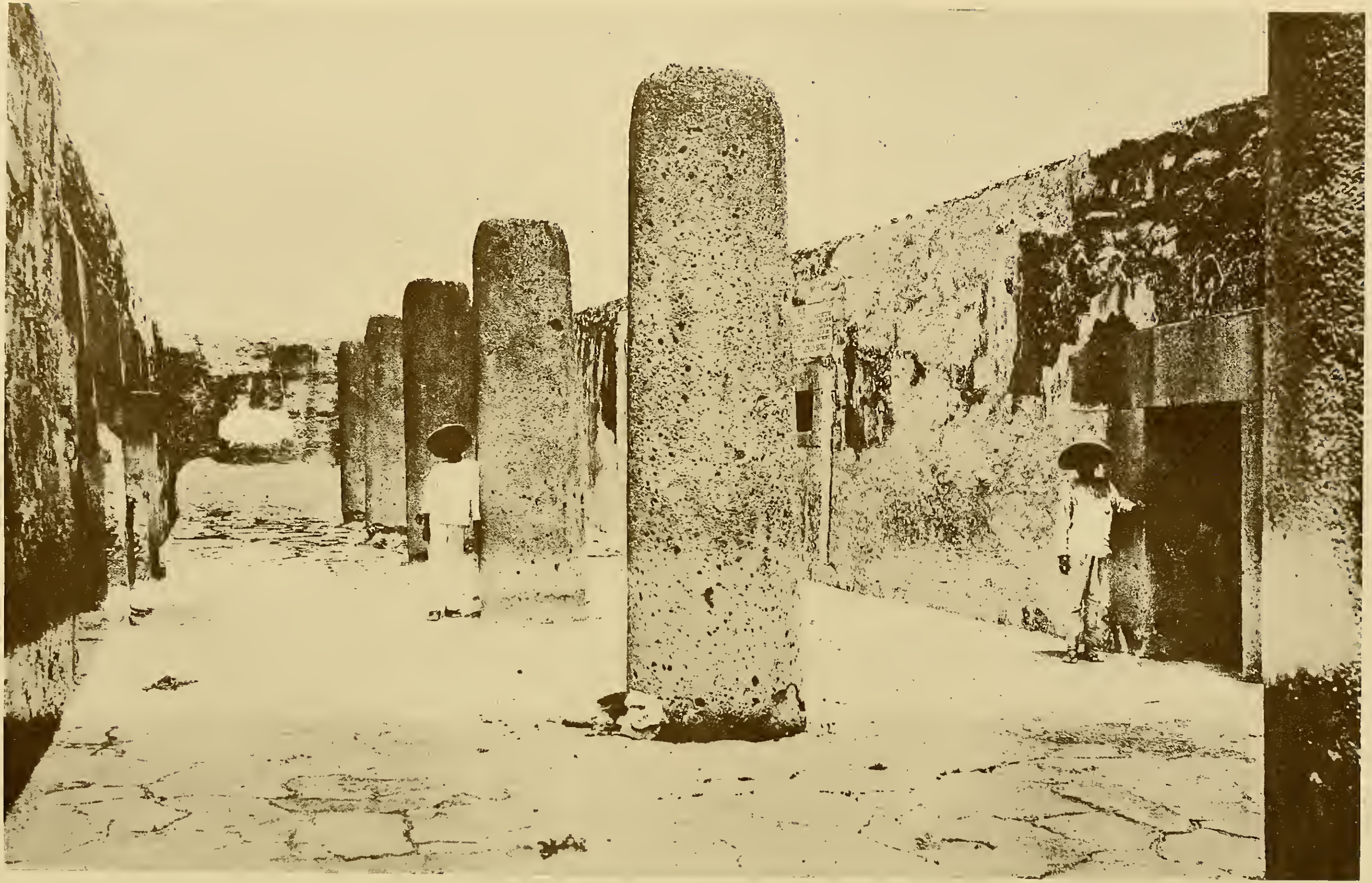
In none of the great ceremonial buildings is there found any other decoration than this mosaic work of geometric designs. There is a complete absence of mural paintings or sculptures which include the human form or life forms of any kind. Fragments of such mural paintings are found in some of the buildings in the group surrounding the church, which buildings were probably not ceremonial buildings but may have been used for residential purposes.

The interior core walls were built of rough stone and mortar. In the Hall of Pillars this was faced on the inner side with squared stones, which in turn were covered with cement of a deep blood-red color. This same cement also covered the floors, as is found also in the north building of the south group and in the east building of the north group. In many places on top of the walls are to be found holes in the cement evidently left there by the round beams which anciently served as the foundation for the roof. The most ancient writer on Mitla says these roofs were made of solid slabs of stone. This would be possible in all of the rooms except the Hall of Pillars, and it is supposed that there the pillars served as supports for longitudinal beams across which were laid short beams transversely to support the stone or cement roof built above them. As has been said, the outside of the buildings was completely covered with mosaic work. The huge lintel stones were carved out into great cornices, as is shown in the diagram annexed.



SHAPE OF CORNICES INTO WHICH THE HUGE MONOLITHIC LINTELS WERE CUT.

Pages of description could not give so good an idea of the character of the mosaic work as will the photographs illustrating this article. It has been calculated that the number of small stones thus employed in the Palace of Pillars alone was not far from 200,000. Each component stone was worked, at one end only, with a raised geometrical



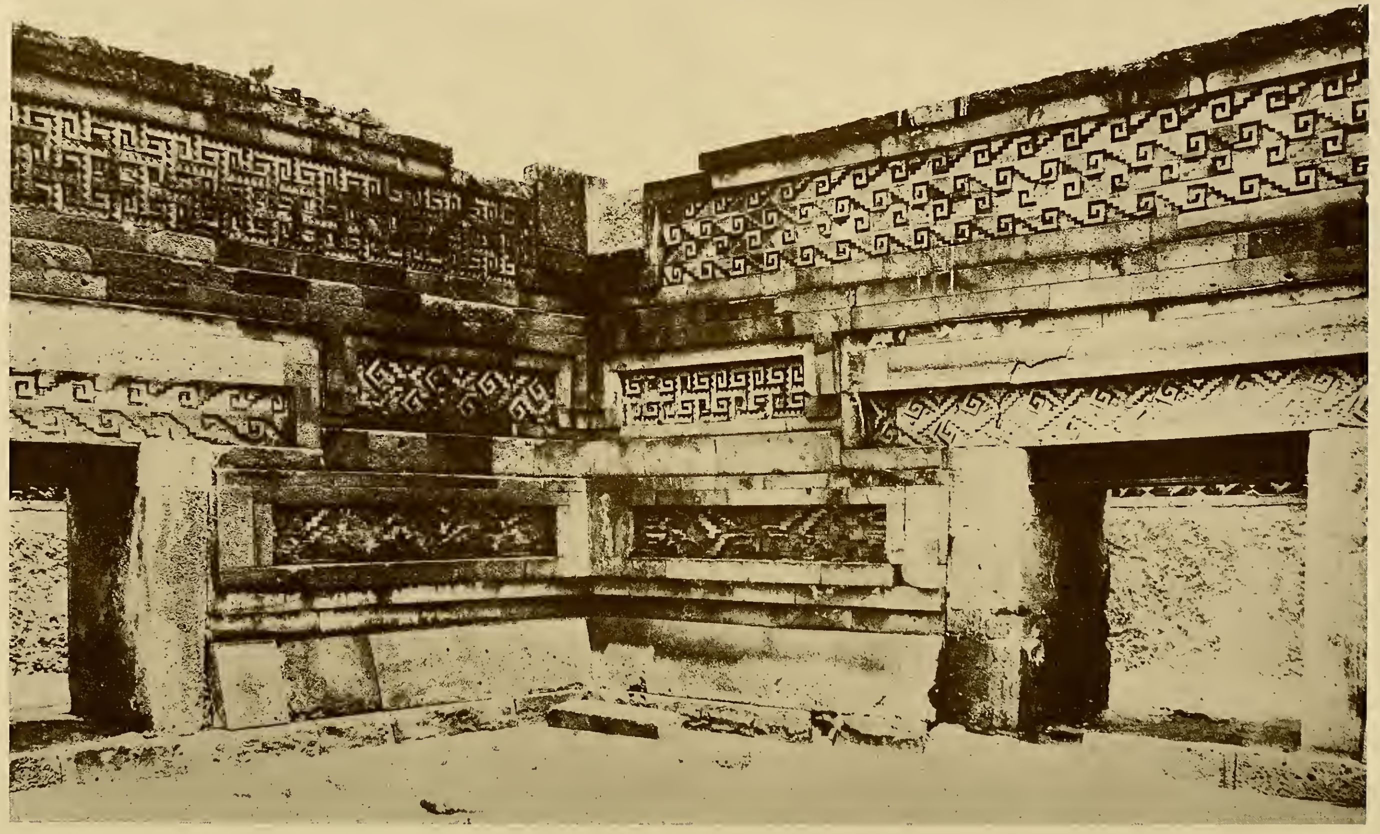
MONOLITHS IN THE HALL OF SIX COLUMNS, PALACE OF THE PILLARS, MITLA.

Attention is directed to the niche in the center of the north wall made by four huge stones, no two of which are of the same size. The columns run lengthwise but not accurately on the median line nor separated from each other by the same distances. These variations would seem to indicate that asymmetry was an element in the architectural scheme of Mitla. The tablet above the niche is a modern attachment. The boy in the foreground marks the entrance of the peculiar passageway to the interior courtyard. The interior walls, it will be noted, are perfectly plain in contradistinction to the handsome embellishments which characterize the exterior walls.

figure. The rough ends of the stones were then embedded in mortar against the heavy interior core wall. The projecting part of the mosaic was from 1 to 2 inches high. The stone used is of a light cream color. There are evidences that the lower parts or hollows were painted a rather bright red, the raised surfaces forming the mosaic being left in the original light color of the stone. The great panel stones surrounding these mosaics were also left in their natural color. In the interior rooms the mosaic pattern, where necessary, was sculptured right across the heavy lintel stones. These huge monolithic stones are of a different material from the mosaic stones and are much tougher and harder. All of the work was done with stone implements, hammers, chisels, and grinding stones. The amount of work expended, therefore, was something prodigious.

The east building of the north group, although an almost absolute ruin, is intensely interesting. Practically only two of the great doorways remain, the huge lintel to the third lying on the ground and the walls having entirely disappeared. However, there are two great columns or pillars, like those in the Hall of Pillars, situated toward the extremities of the room. They are 54 feet apart, and in 1881, when I first visited Mitla, a smooth sheet of cement stretched between them. Unless this sheet of cement was laid down long after the occupation of the land by the Spaniards, no other columns can have existed between these two, although it has been asserted by some eminent archæologist that two pillars which support a porch near the old church and another in some other part of the village came originally from this building. I did not believe this when I was there, and I do not believe it now. Admitting that the columns in the Hall of Pillars may have been also used as roof supports, I believe they had a special symbolic significance, and that in this building I am now writing of they did not serve as roof supports.

Leaving this north group for a moment, I wish to as briefly describe two of the buildings of the south group. The northern building of this group is about 88 feet long and 20 feet wide. The monolithic doorways and lintels are slightly smaller than those of the north group. Below this building, and in its mound, are the famous subterranean rooms of Mitla. The entrance to this subterranean is beautifully shown in the accompanying illustrations, which also shows very distinctly the typical niche in the room above. These subterranean apartments are about 6 feet 4 inches high and 5 feet 2 inches wide. Two of them are a little over 18 feet long, the third being a little more than 12 feet long. At the junction of the three rooms, which form the arms of a cross, there is a pillar supporting the roof, stone, and entrance. Facing this pillar, and in a southerly direction, are three steps rudely cut in the solid rock and leading into a room or passageway. About this passageway for 300 years has centered the

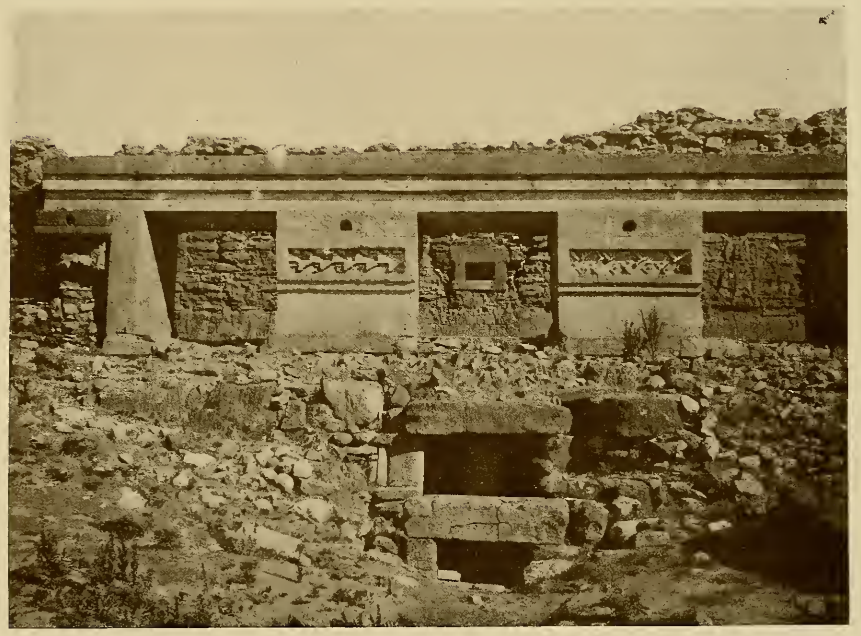


NORTHEAST CORNER OF THE INTERIOR COURTYARD OF THE PALACE OF THE PILLARS AT MITLA.

The portions of the wall facing the court present an idea of the long grecque panels over the doorways and the smaller panels below. The great lintel is also well shown with its smooth surface above and the sculptured grecque panel below.

interest of Mitla. In 1674 Francisco de Burgoa wrote a long description of these ruins, too long to transcribe in this article, but which can be found in my "Notes on Mitla," published by the American Antiquarian Society, of Worcester, Mass., in 1882. I will quote only what he has to say regarding this subterranean passage:

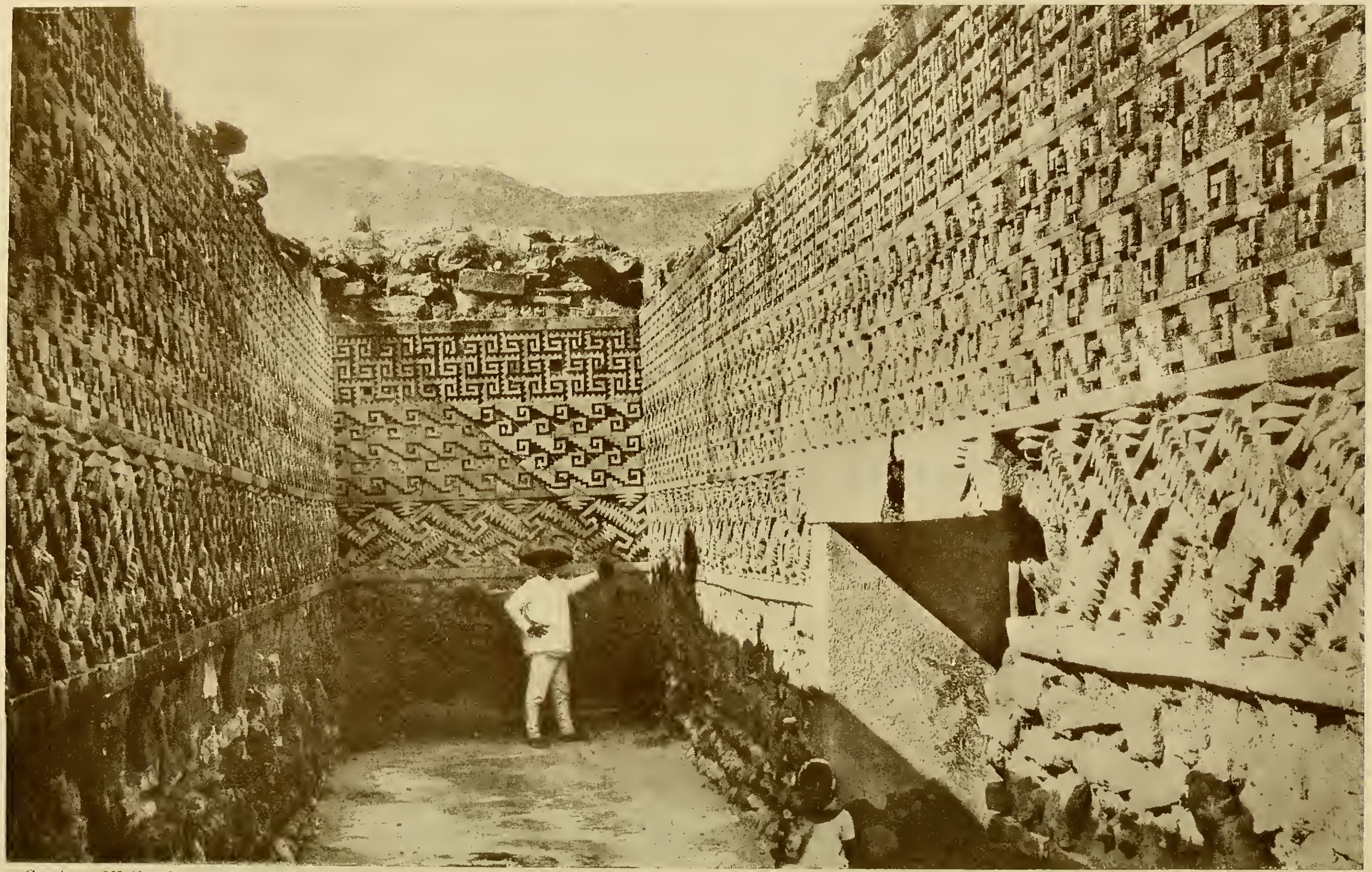
> And from their fabulous traditions it was known that they were all persuaded that this frightful concavity ran more than 30 leagues under ground, the roof being held up by columns, and there were men and certain curious prelates of good zeal who, being anxious to undeceive these ignorants, went down some steps with a great crowd carrying hatchets and many lighted torches and forthwith met with many columned rows like streets. They brought with them beforehand many strings to use as guides, that they might not lose themselves in that confused labyrinth, but such was the corruption and bad smell, the dampness of the floor, and a cold wind which extinguished the lights, that at the little distance they had already penetrated, fearing they might become pest stricken or might meet with some poisonous reptile, of which they saw some, they resolved to come out, and ordered this infernal gate to be thoroughly closed with masonry.
>
> In 1824 Mr. Nicholas Mill wrote: "The palace of Mitla was appropriated as a retirement for the sovereign, to lament for the loss of a wife, a mother, or a son. A staircase formed in a pit leads to a subterranean apartment 88 feet by 26."



FAÇADE OF NORTH BUILDING OF SOUTH GROUP.

The entrance to a subterranean chamber is shown in the foreground. In the chamber above is the peculiar niche which is found in all of the buildings at Mitla. Idols of solid gold have been found buried in various parts of Oaxaca, and possibly these niches served to hold them.

I was assured by the guardian of the ruins that the passage certainly ran from one side of the patio to the other, a distance of about 150 feet. Resolved to set the vexed question at rest, I had four excava-



Courtesy of National Geographic Magazine.

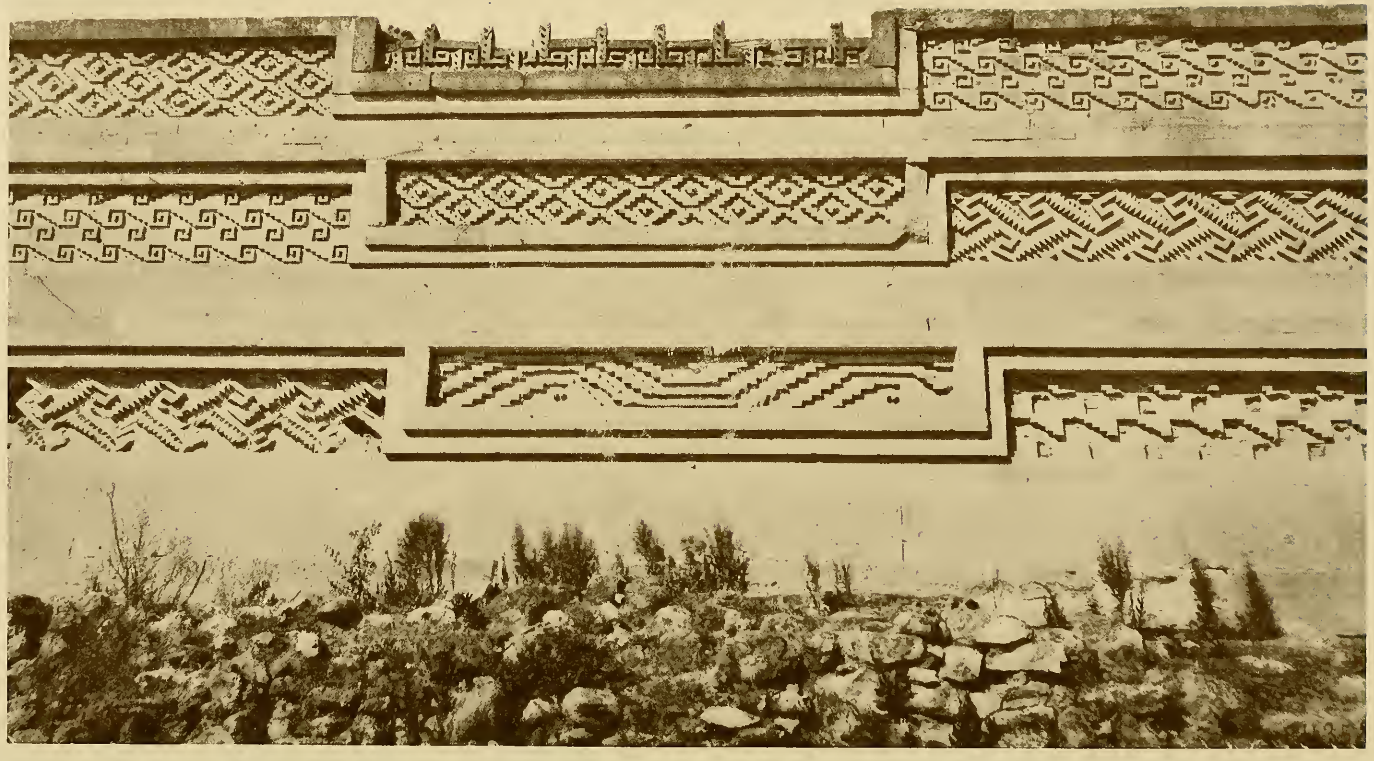
AN AUDIENCE ROOM OPENING ON THE PALACE OF THE PILLARS, MITLA.

The builders did not use doors, but provided sockets beside the doorways for awnings. They were evidently not acquainted with the use of the arch, all doors in the buildings being surmounted by heavy blocks of stone, which weigh sometimes as much as 15 tons.

tions made, one 75 feet from the front of the north building, which at the depth of 3 feet ran into solid rock. To make certain of this I continued the excavation 3 feet down into the rock. The second, 60 feet from the building, gave precisely the same result. The third, 50 feet from the building, struck rock at 3 feet 8 inches and was carried down through the rock to a depth of 7 feet 6 inches. The fourth, 43 feet from the building and 18 feet from the pillar of the subterranean, went down 5 feet in sand. I then set a force of men at work on the north side of the passage and had them clean it out. When this work was done I found that the 30 leagues of Burgoa and 88 feet of Mr. Mill were reduced to much smaller figures. This marvelous subterranean is only a room, and a very small one, indeed. It is about 9 feet 6 inches long, 4 feet high, and 3 feet 7 inches wide. The roof is of very large stones. The south end was once closed by a huge stone, which is still lying in the patio. The floor was of hard polished cement, and the walls of the room were ornamented with the usual mosaic pattern in a band, not quite 2 feet wide and a little more than a foot above the floor. The stones of this mosaic were much decomposed from dampness. I broke through the cement floor and found there was solid rock below. In fact, a great hole had been dug in the rock and this chamber constructed therein.

Facing this hall of the subterranean is a building which possesses a feature of special interest. The great monolithic lintel over the east doorway was carved into the usual cornice as I have heretofore explained, but, for some reason after this carving was completed, it was all filled up with fine cement stucco and the stone was then turned around and carved on the other side as shown in the diagram. As this great stone probably weighs 10 tons or more and was most likely carved after being elevated on the door jambs, the work of taking it down and turning it around and recarving it was very great indeed, and is a direct proof of the exact carefulness of the architect and builders of these buildings.

I wish to insist on this point in connection with what seems to be the basic principle on which all of the buildings and parts of buildings were constructed. That principle is asymmetry. No patio is a perfect square, no doorways are found in the exact centers of the buildings, and a line drawn at right angles to any building from the center of its center doorway will not strike the center of the central doorway of the opposite building. The great row of columns in the Hall of Pillars does not occupy the exact central line of the room, and the spaces between the end walls and nearest pillars and between the pillars themselves are not the same. As may be seen by examining the photographs, no panel of mosaic decoration is repeated on the opposite side of doorway or other architectural division. The roof was wider than the base. The only ornamentation is purely geomet-



SOUTH FAÇADE OF THE PALACE OF THE PILLARS, SHOWING ELABORATE EXTERIOR DECORATIONS.

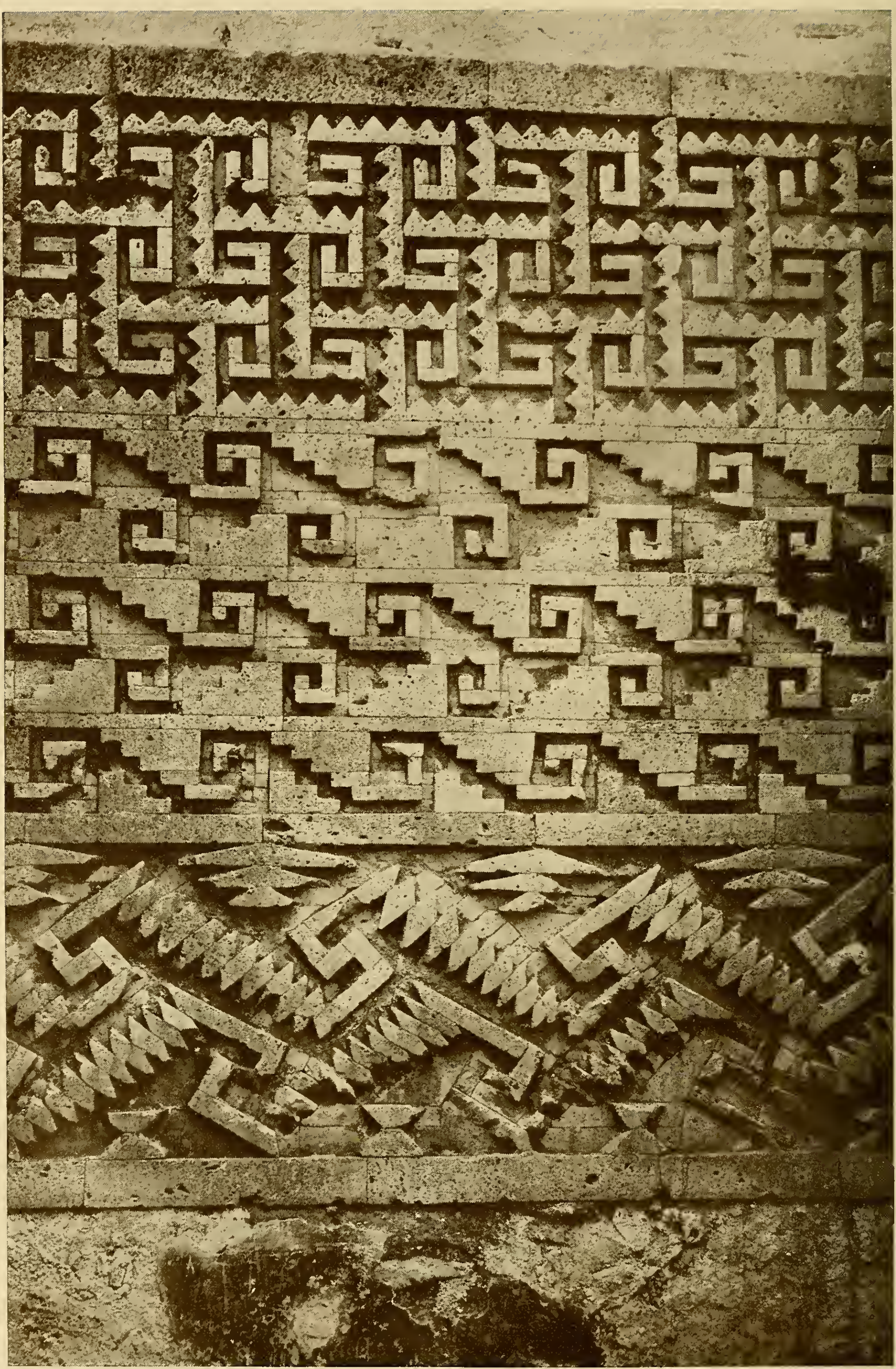
The designers of the buildings at Mitla had only a limited number of motives to draw upon, but considerable taste was displayed in arranging these in various combinations to suit the spaces and to give diversity of effect.

ric. The buildings are composed of enormous stones and very small stones indeed. No lintel is centrally placed over the doorway; one end may project a foot and the other end several feet. Mr. Bandelier, who visited Mitla only a few days before my first visit, seems to have noticed this lack of symmetry. He attributes it to the construction of the buildings having been by "rule of thumb." If we sometimes found exactness in measurement and sometimes variations, this might be so; but when we carry our examination through the fifty-odd buildings scattered about Mitla and find lack of symmetry always prevailing, we are compelled to believe that it was done with a purpose. This great lintel stone in the south building of the south group is absolute evidence that the builders of these monuments exercised the very greatest care and were not sparing in labor to secure the effect that they desired.

In the east room of the interior quadrangle of the Palace of Pillars I found another example of work which brought the old builders of these edifices very close to me. As I have said, the mosaic pattern was sculptured across the face of the great lintel stones, but in this apartment the north end of the lintel stone is in a dark corner. The south end is deeply sculptured. To examine the other end I used a torch, and to my great surprise found a huge space of the stone in this dark corner had been left unsculptured. I can not even guess at why this was done.

I regret that I can not even refer to the other buildings and groups of buildings, and particularly to the great mound of sacrifice and to the buildings incorporated in the old church. I wish to try to give a word picture of Mitla as it must have appeared when complete and some notion of what these buildings were used for. I give this word picture with all modesty and as a mere hypothesis. The ruins themselves are eloquent, and such emphatic and striking personal touches as the red hand prints among the Maya ruins, this carved lintel stone and the uncarved portion of mosaic helped me wonderfully to reconstruct the life at the time when these buildings were erected and occupied.

I believe then, that Mitla was, as its name indicates, the ceremonial city for the dead. The great group, of which the Palace of Pillars is the principal building, was probably the great ceremonial building of them all. The south group was probably that in which the final ceremonies attending the death of a chief, high priest, or other dignitary were performed. The remaining buildings were probably for the use of the visiting dignitaries and for the priests and officers who served Mictlan Tecuhtli, "The Lord of the place of death." The shapeless mounds on which the buildings now stand were covered with cream-white stones forming ample terraces about the buildings. The buildings themselves stood in the midst of the vast plain, bril-



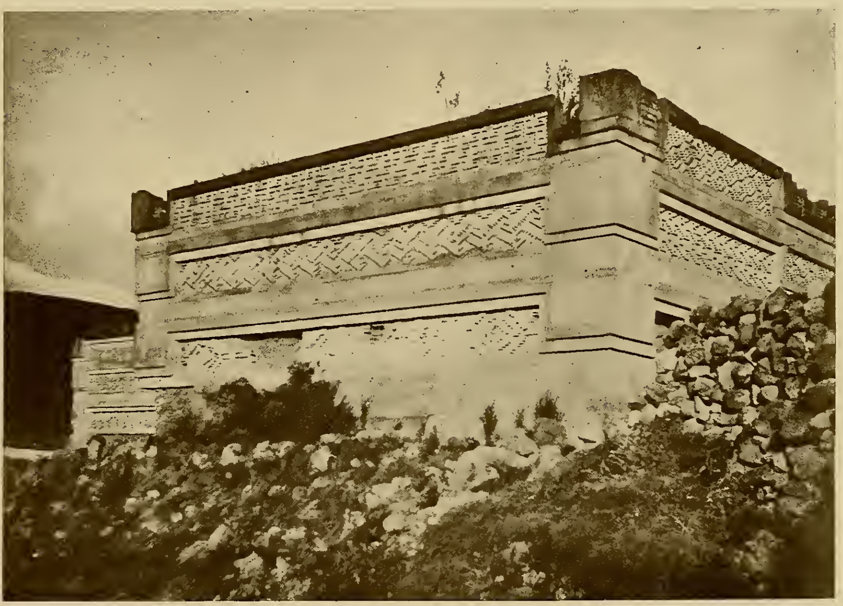
Courtesy of National Geographic Magazine.

FRETWORK MOSAIC IN THE PALACE OF THE PILLARS, PROMINENT DECORATIVE ELEMENT AT MITLA.

The stone slabs or tiles are about 1 inch thick. It is estimated that more than 1,000,000 of these stones were used in decorating the buildings at Mitla. When we realize that each stone was cut out of the quarry, not with steel or iron implements, but by stone hatchets and other stone tools, the infinite labor and pains required for this form of decoration can be appreciated.

liant crimson and white in the glaring sunlight. Entering the buildings one was plunged into almost absolute darkness. The careful symmetry of the buildings, both as groups and in every detail, gave them, still more strikingly than now, a feeling of the bizarre, and strange.

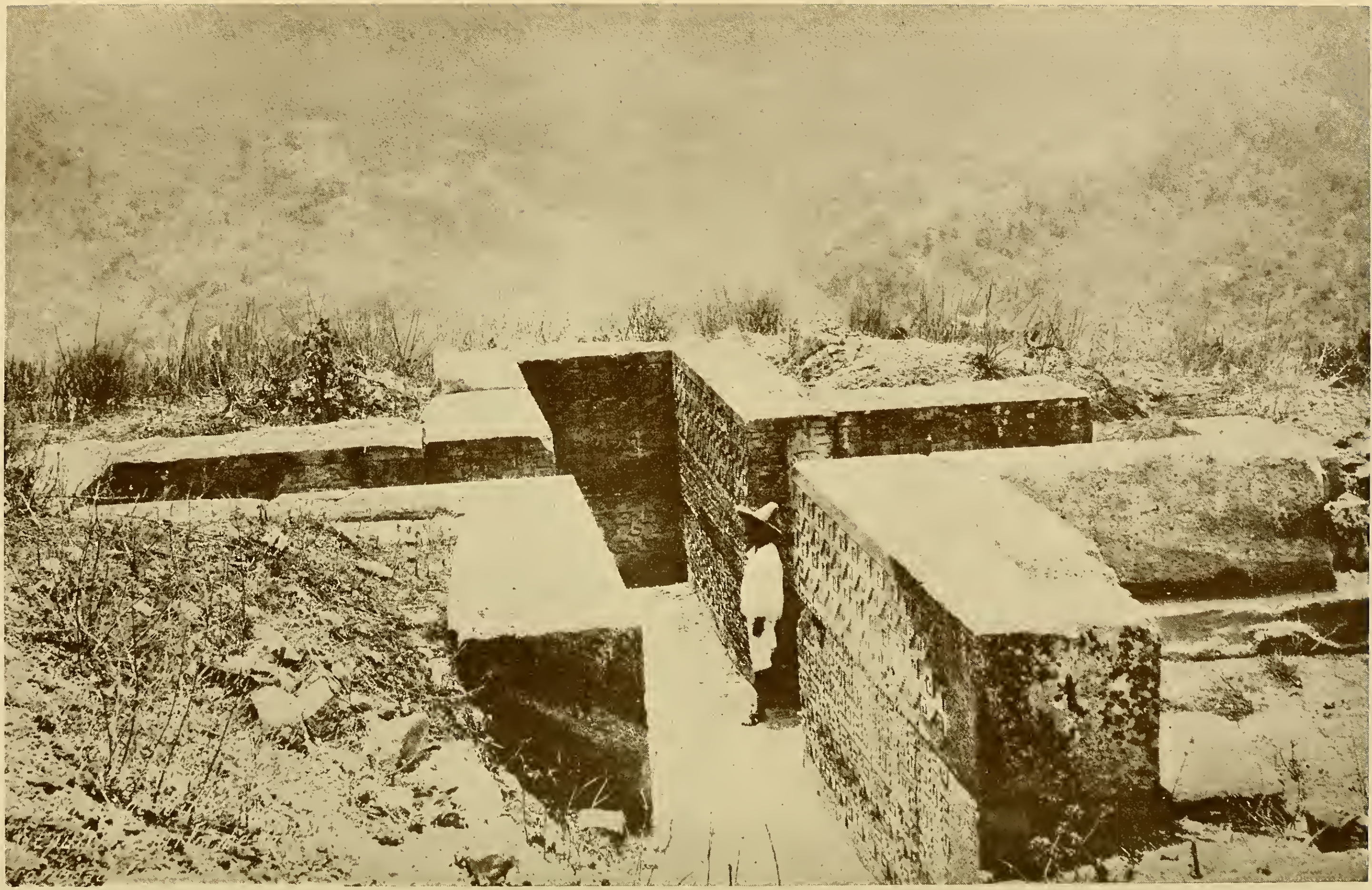
It is not difficult to imagine long processions coming from distant points through the Valley of Oaxaca, passing under the grim walls of the frowning Fortin, and descending into the burning plain of Mitla, carrying the body of some dead chieftain. The terraces about the buildings are covered with the strangely robed priests of death. In the central patios are congregated the common people to witness the ceremonies. On the high sacrificial mound other priests stretch the human victim on the sacrificial stone before plucking out his yet living heart and offering it to the Lord of death. Those richly decorated interior rooms of the great hall, absolutely windowless and covered with a solid roof, must have been lighted probably with torches, and one can imagine the effect of the wavering light on the long lines of strange mosaic designs and readily believe that in these rooms were performed mystical rights symbolical of that strange lower world to which they believed the dead had gone. Later we can imagine the body taken to the south group and possibly consumed by fire, in



(Photo by Chas. G. Wood.)

ONE OF THE LARGER PALACES AT MITLA.

All the buildings in this wonderful group, excepting the Palace of the Pillars, contain only a single long and narrow room with thick walls but one story in height. The stone blocks, though weighing sometimes as much as 15 tons, were cut out of the quarries near by with their hatchets of stone with such precision that very little mortar was required for the joints.



Courtesy of National Geographic Magazine.

CRUCIFORM GRAVE NEAR MITLA.

Several of these cruciform cellars have been discovered at or in the vicinity of Mitla. They probably were the sepulchers of important priests or nobles. On a hill about a mile from Mitla there are some fortifications, probably built by the same people, which in massiveness and skill compare with the ancient fortifications of Peru. Piles of rounded stones remaining on the walls show that the sling was a formidable means of defense in those days.

the center of the great square, the bones and ashes being, for a time at least, deposited in the subterranean rooms.

I know of no other group of ruins anywhere in Central America at all like these of Mitla, either in appearance or use. One may ride for miles in certain parts of Central America and find on every hand ruins of enormous buildings. In Yucatan alone I know of more than 70 ruined cities. In no case can we certainly determine what use was made of these buildings, whether they were residences, palaces, or temples. We do know that the great mass of people lived in small structures of wood or adobe, which, of course have long since disappeared, but here in Mitla we have buildings in no way fitted for purposes of residence, but in every way thoroughly symbolic of the strange religion of death which they were built to celebrate. These ruins therefore offer to the earnest student of American archæology a most promising field. It will not do, however, to pass a hasty judgment or form rapid theories. Not only every building, but every stone of every building must be measured, scrutinized, and asked to tell its story.

The quarries from which the huge monoliths were cut have been found 6 or 8 miles away, rough mountain trails lying between the quarries and the finished buildings. It was not lack of care or wish to avoid labor, therefore, that caused them to use these enormous stones. They must have possessed a special symbolism for the builder and also for those who beheld the finished building. One student has written that they did not face the buildings on the outside with squared stones, because they wished to avoid the hard work that would entail, and yet these walls are covered with actually a million tiny stones, each one of which had to be carefully and accurately hammered and ground out with stone implements. It is intensely significant and a very complete answer to the "rule of thumb" theory that each one of these small mosaic stones is accurately worked to the same size, angle, and pattern as all of the other thousands employed. I think the secret of not only the ruined buildings of Milta, but indeed of all of the relics of that old civilization throughout Central America is to be found by giving the fullest possible weight to the intention of the builders to express in building and in ornament symbols of their deepest beliefs.

When I visited these ruins it was a five days' trip on horse or mule back across mountains before one reached the city of Oaxaca. To-day the railroad in a few hours takes the traveler to that pleasant city, and a carriage ride of 30 miles will bring the traveler to the delightful little hotel in the village of Mitla. There are no forests or jungles to clear or penetrate, no ticks or insect pests, and without danger to the traveler, and with maximum of comfort, anyone may to-day visit these marvelous ruins and test for himself the probability of the theories I have here so crudely and briefly sketched out.

THINGS SOUTH AMERICAN IN A NEW LIGHT ⁂ ⁂

THE growing interest in South America has been the occasion, during recent years, of an immense number of books in many languages on the lands of the Southern Cross. Some of these books have been written by those whose sole object is the development of trade and manufactures. Others are devoted to exploiting the mineral resources of the continent and to pointing out to foreign capitalists the most attractive fields for investment. Others still are entirely scientific in character and deal with the fauna and the flora, the geology and the archæology of the countries described, while yet others are special monographs or elaborate treatises on the languages and the manners and customs of the various Indian tribes who people the llanos, the selvas, and the pampas of this interesting part of the world. Then there are the countless books of travel—of varying merit—which are every year published in Europe and America. Some of these are written by men and women whose knowledge of the lands visited is confined to that gained by hurried calls at certain seaports and places in the interior which may be conveniently reached by a Pullman car. It is but rarely that we find a book that is written by one who has left the railroads and the coast towns, and then, unfortunately, the authors are often ignorant of the languages of the people among whom they travel, or are disposed to find fault with everything that is different from that which exists in their own country, or which is not in accordance with their own preconceived notions. In both cases the writers naturally fail to do justice either to the countries visited or to their inhabitants. Their views are circumscribed or biased, and their judgments are unsympathetic, if not positively antagonistic.

Of course there are, we are glad to say, notable exceptions to the class of writers just indicated. Those who have spent the most time in South America and who know its people best are those who give us the truest accounts of them and who speak most loudly in their praise. The same may be said of those who are familiar with other countries as well as their own. They are men of broader sympathies and realize that there is much of good to be found in other lands as well as in that of one's birth; that differences of manners, customs, religion, language, traditions, do not imply social inferiority, or a lower plane of culture or less exalted ideals; that, in fact,

MOUNT CHIMBORAZO, ECUADOR.

Few of the works of nature are calculated to produce impressions of higher sublimity than the aspect of this mountain, rising 21,420 feet above sea level, with its glorious canopy of snow and ice glittering far above the clouds.

there is much to be found in South America that is worthy of our admiration and imitation; much, indeed, that is superior to anything that we yet possess.

The foregoing thoughts are suggested by a new work, by Dr. H. J. Mozans, that has just been issued by D. Appleton & Co., entitled "Following the Conquistadores Along the Andes and Down the Amazon."[1] It is a beautifully illustrated book of nearly 600 pages, and is virtually a sequel of a similar work, "Following the Conquistadores Up the Orinoco and Down the Magdalena," which was reviewed in the BULLETIN of last November. A notable feature of the present volume is an excellent introduction by ex-President Roosevelt, who still evinces the same keen interest in everything that pertains to the welfare of the South American republics that distinguished him when he was in the White House, and particularly when he sent Secretary Root on his memorable mission to the countries of our sister continent.

The work is apparently a book of travel, but it is in reality far more than this, for in its pages are embodied the history, the poetry, the romance of the countries described in a way that makes it as fascinating as it is instructive. Not content with recounting the incidents of his journey and his own impressions of the people with whom he came in contact, Dr. Mozans draws freely on the old Spanish chroniclers for material to illuminate his narrative or to corroborate statements that the reader might otherwise be disposed to call in question. Then, too, when the subject under discussion demands it, he gives us in a few words the conclusions of modern explorers and investigators, and thus renders his work one on which the reader can rely for inferences as well as for facts. Every page is stamped with the hallmark of scholarship, keen observation, and patient research, while the author, who is the master of a graceful and vigorous style, presents his impressions of places and things against a historical background of infinitely varied and ever surprising knowledge.

For the general reader the most surprising part of the volume will be the bibliography as it will be for the student the most valuable. To those whose knowledge of South America is limited to the articles they read in newspapers and magazines, it will be a revelation to see the long list of chroniclers, historians, men of science and literature that have immortalized themselves in South America or who have achieved distinctions by their works on the lands which were once under the Spanish flag. It will be a still greater revelation for them to learn that some of the most notable of these works were written nearly a century before the Pilgrim Fathers set foot on Plymouth Rock and that there was a printing press in the heart of the Andes, on the shore of Lake Titicaca, several years before one was introduced into what is now known as the United States.

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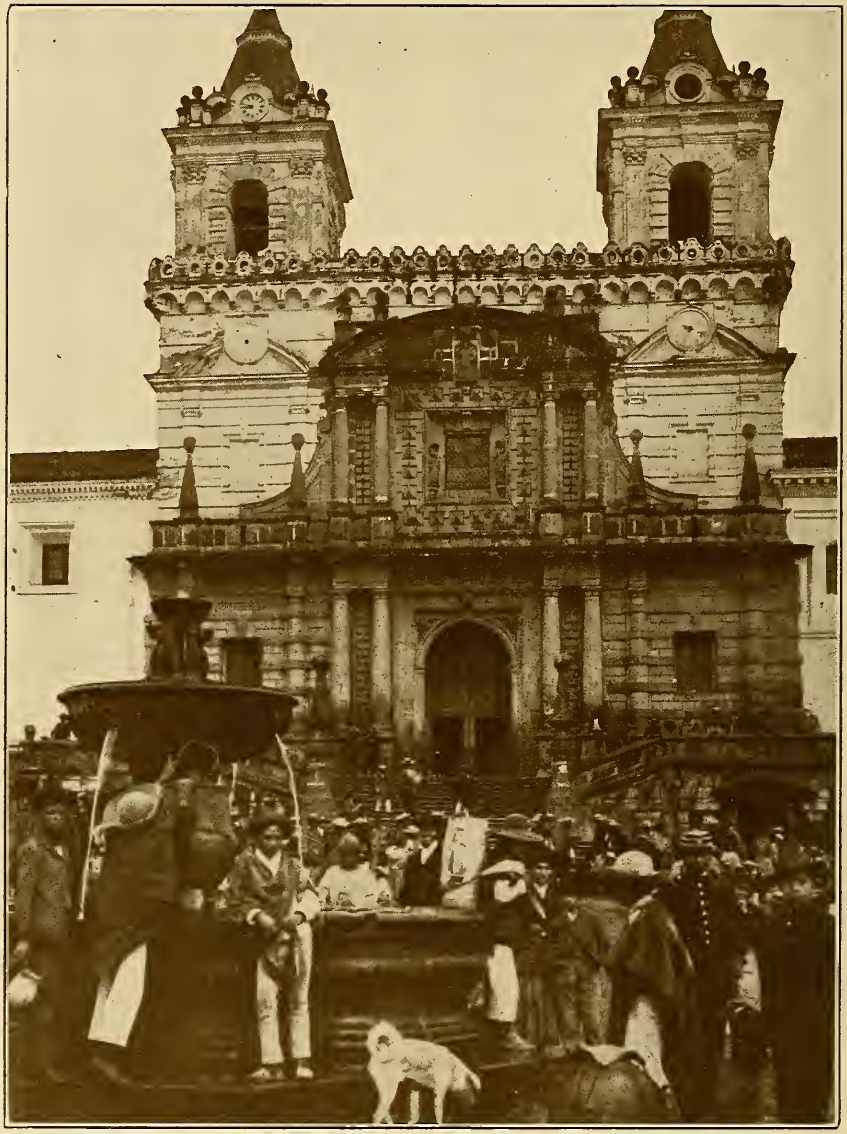
[1] Following the Conquistadores Along the Andes and Down the Amazon, by H. J. Mozans, A. M., Ph.D., with an introduction by Col. Theodore Roosevelt, and a map and illustrations. Pages, 562; published by D. Appleton & Co., New York; Crown 8vo.; price, $3.50.

Dr. Mozans's avowed object in visiting South America was to explore the lands traversed by the Conquistadores and by those intrepid adventurers who sought fame and fortune in the quest of El Dorado. This often led him into regions but little known and rarely visited by any one except an orchid hunter or an egret collector. Friends endeavored to dissuade him from undertaking what they assured him was a perilous journey. They descanted on the dangers to be apprehended from wild animals and wilder men; the tortures that would day and night be inflicted by clouds of insects; the perils from venomous serpents, which hung from every tree and lurked beneath every bush; the risks that would be incurred by the lack of food and the torrid heat of the Tropics. But in spite of all these presages of evil and misfortune the author held steadfastly to his purpose and followed his itinerary as he had planned it when he set out on his long and eventful journey.

We are grateful to him that he did so, for his experience throws a new light on many places of travel in the interior of South America, and shows that the difficulties to be encountered have been greatly exaggerated; that one may visit the most untraveled parts of the Andean Range or the Amazonian Basin in perfect security and with but a minimum of danger and discomfort.

Dr. Mozans writes:

> During my entire journey from Cajamarca to the mouth of the Amazon I did not see or even hear a single tiger—the name commonly applied in South America to the jaguar—or serpent of any kind. I was never but once molested by insects, and that was only for a few moments, when I inadvertently sat on an ant hill. Only once during my trip across the continent did I use a mosquito bar, and even then the mosquitoes were so few that my companions dispensed with such protection.
>
> More than this, I left New York an invalid and presumably requiring the conveniences and comforts of home. But no sooner did I begin to rough it in the wilds of the equatorial regions than health and strength returned apace, and it was not long before every vestige of illness had entirely disappeared.
>
> And nowhere did I suffer any inconvenience from change of climate or food. Only once was I incommoded by the heat and that was when I was trying to take a siesta on the Huallaga; and only once did I suffer from cold. This was at the foot of Chimborazo, where our train ran off the track, and where we had to spend a chilly night in a windowless car, with no means of heating it. Although I frequently spent many days in succession on horse or mule back in a continual downpour, I never got wet and never felt any ill effects from exposure. Of course, I always took whatever precautions prudence dictated, and followed, as I should have done in my own country, the ordinary rules of hygiene in eating and drinking. Where I could not find a clean bed in the humble homes of the natives, I always had recourse to my cot and blankets. Where the huts or tambos were small or crowded, I always used my tent, and in this, whether on the summit of the Andes or in the forests of the Montaña, I slept as soundly as I ever did in the downiest couch.



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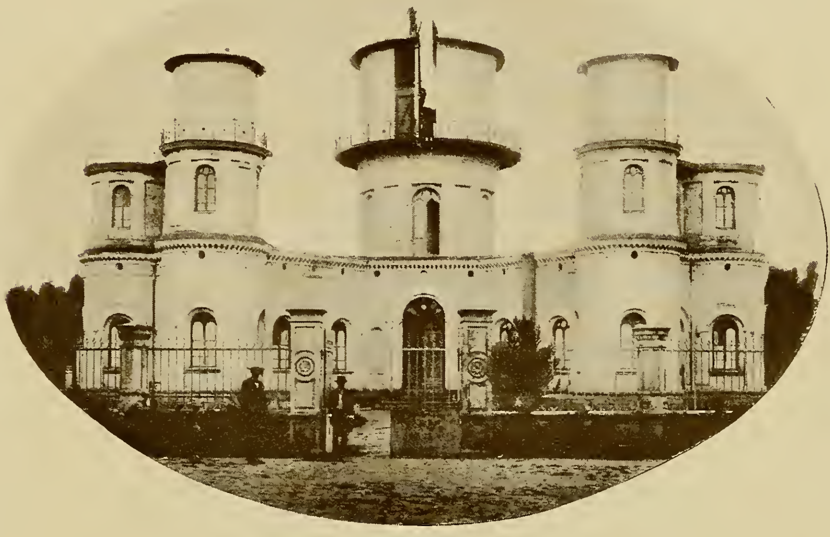
SAN FRANCISCO CHURCH, QUITO, ECUADOR.

This stately edifice dates from the early colonial period, and is one of the oldest buildings and most prominent churches of the capital of the Republic.

As to food, I found no difficulty in satisfying the cravings of hunger with the simple fare prepared for me by the natives. So far, indeed, was this from being the case, that I soon came to enjoy it. No one could have broiled a chicken better, or prepared a better stew than did many of the Indian women who acted as my cooks during my peregrinations. While traveling in uninhabited districts, I drew from my own stores, which I always had with me for any emergency. * * * In most places I could get chickens and fresh eggs, not to speak of an abundance of fruit of various kinds. But wherever my provisions came from, I never suffered from hunger more than a few hours at most and never found it necessary to eat what was unwholesome or repulsive. I always carried a good filter with me to insure pure water, and, by this means I never experienced any of the evil consequences which result from drinking the contaminated water of rivers and streams.

There was never any danger, even in the most untraveled parts of the country, and only once did I regret that I was not provided with firearms. That was on the Meta, when I saw a cloud-like flock of wild ducks flying over our heads and had no means of securing a few of them for a change of diet. The people everywhere—whites, mestizos, Indians—were always kind and considerate, and only twice had I reason to complain of lack of courtesy and fair treatment, and that was at the hands of two supercilious Europeans—agents of two foreign corporations—men who seemed to fancy they were furthering the interests of their companies by resorting to sharp practices which they would never dare attempt where condign punishment would immediately follow.



OBSERVATORY, QUITO, ECUADOR.

All who are even remotely interested in South America are Dr. Mozans's debtors for having so effectually dissipated the erroneous notions that have so long prevailed regarding the dangers of travel along the Andes or in the regions watered by the Orinoco and the Amazon. But they are his debtors for more than this. They are indebted to him for a mine of interesting and valuable information that has hitherto been confined to the rare or forgotten tomes of the early Spanish chroniclers—information regarding the achievements of the Conquistadores, who left their impress on every part of the southern continent, but particularly on that part described by the author—information regarding tribes and peoples long since extinct, but who have left behind them monuments that for centuries past have extorted the admiration of all travelers and have furnished for men of science material for theories without number regarding the origin and antiquity of man in the New World.

"Along the Andes and Down the Amazon" is essentially a thought-provoking work. Although it deals with many and diverse topics, the continuity of the narrative is never broken and the interest never flags. It presents many subjects, that have been discussed by previous writers, in a new light and from entirely new points of view. One may not always agree with the author, but one can not but admire the skill with which he marshals facts and his evident honesty of purpose to arrive at safe and sane conclusions.

Of the Conquistadores, in whose footsteps over mountain and plain and through trackless forests he followed for a year, Dr. Mozans, adopting the sentiment of the Colombian writer, José M. Samper, writes as follows:

> Their exploits were so stupendous, so fabulous, that no epic could do them justice, no narrative, however faithful, complete, or masterly, could portray the reality. It is necessary to have been born and to have lived a long time in (South) America and to know the Andes, the deserts, the forests, the rivers, the morasses, the coasts, the climates of this part of the world, where everything is colossal; to compare the formidable obstacles which still exist with the far greater ones overcome by the Spaniards, in order to form an adequate idea of the prodigious daring, heroism, and inflexibility of the Conquistadores. All the impetuosity of the conqueror of the Moors, the indomitable impetuosity of the Arragonese, the patient and silent constancy of the Castilian, who fought and died with a jest on his lips, the vehement curiosity and passion of the Andalusian, the cold and calculating perseverance of the Catalonian and the Basque, were exhibited in that struggle of a handful of Titans engaged in the conquest of a world of exuberant heat and life, force and majesty, riches and population, novelty and marvels. * * * In that epoch all was great, the good and the bad, iniquity and virtue, force and resistance, but the greatness of force was in man while that of resistance was in nature.

In the opinion of Dr. Mozans, the much-abused Francises Pizarro ranks as the greatest of the Conquistadores, and our author shares the hope of the late Archbishop Tovar, of Lima, that—

> we may be able to salute with admiration and respect in the Plaza Major of the metropolis the glorious statue of the conqueror of Peru and the founder of Lima.

Dr. Mozans writes:

> We may not like the conqueror of Atahualpa, but we must admire him. After an unfortunate infancy and an obscure adolescence, during which he had none of the advantages of home training or scholastic instructions; after an early manhood spent among a profligate soldiery in a desperate struggle against fortune, the impecunious adventurer

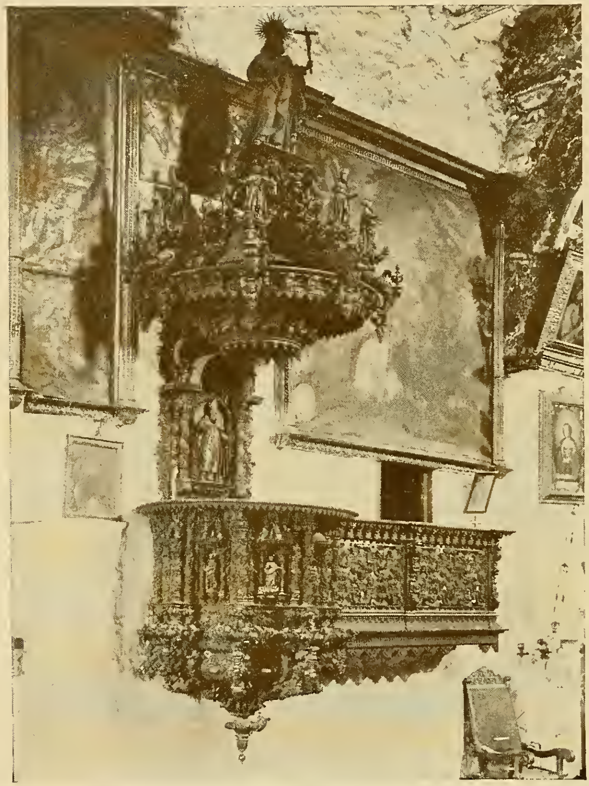
becomes the master of a more extensive empire than that of his puissant sovereign in Europe. An iron will and a rare prudence in the hazards of war and the ventures of business enterprise always secured for him the laurels of victory and the guerdon of success. He was never defeated and never taken by surprise. Everywhere he went in Peru he left imperishable monuments of his passage. In less than seven years he founded the cities of Piura, Trujillo, Jauja, Huamanga, Huanuco, La Plata, Arequipa, and Lima. In addition to this he contributed very materially toward the betterment of Tumbez, Puerto Viejo, Cajamarca, and Cuzco. He laid the foundations of art, industry, and agriculture, and made special provision for the moral and religious development of his subjects. No adventurer ever conquered a more extensive territory or achieved so much with so little. No one ever gave greater riches to the land of his birth, no one spent less on himself or more in furthering the best interests of a conquered country. And although he had command of almost limitless resources and was able to reward his lieutenants with possessions richer than those of princes, no one was ever more loyal to Spain or deserved better of Peru.

THE HOUSE OF ATAHUALPAS' RANSOM.

What such a man might have become had his childhood and youth been different and had he enjoyed the advantages of education and culture is idle to speculate. As it was, he became, by the sheer force of genius and daring, one of the greatest and most successful commanders in history. Had he possessed in addition to genius and daring the accomplishments of a Cortes or a Ximenes de Quesada, it is not too much to assert that he would have taken rank with such transcendent leaders as Cæsar or Bonaparte.

Speaking of the successors of the Conquistadores, of the great Iberian race to whom belongs the whole of the Western Hemisphere from the northern frontier of Mexico to the Straits of Magellan, and which, with its possessions in Europe, Asia, and Africa, rules over one-fourth of the earth's surface, Dr. Mozans does not hesitate to declare that—

> No other race since the fall of Rome, except the Anglo-Saxon, has achieved more in conquest or colonization or has contributed more to the advancement of civilization and culture. A composite race like the Anglo-Saxon, and possessing some of the strongest elements of the English people, it is a race of inexhaustible vitality and possesses a boundless field for future expansion and development. Great as has been its past and mighty and manifold as have been its influences and achievements in every sphere of activity, its future will be still greater. Indeed, the Neo-Latin race, now advancing with such marvelous strides, bids fair soon to become a close rival of the noble Anglo-Saxon race in the great Republic of the North.



PULPIT IN CHURCH OF SAN BLAS, CUZCO.

This view of the Neo-Latin race, now so rapidly developing in the southern continent, is no idle fancy, no dream of an enthusiast; for, as Dr. Mozans expresses it with truth and eloquence—

> When one studies on the ground what has been accomplished for civilization by the descendants of the Conquistadores; when one contemplates their universities and other institutions of learning; when one scans the long list of names of those who have achieved distinction in science, art, literature, economics, jurisprudence; when one notes the progress that is now being made in commerce and in the development of the inexhaustible resources of forest, field, and mine; when one watches shipload after shipload of immigrants eagerly hastening to the land of promise under the Southern

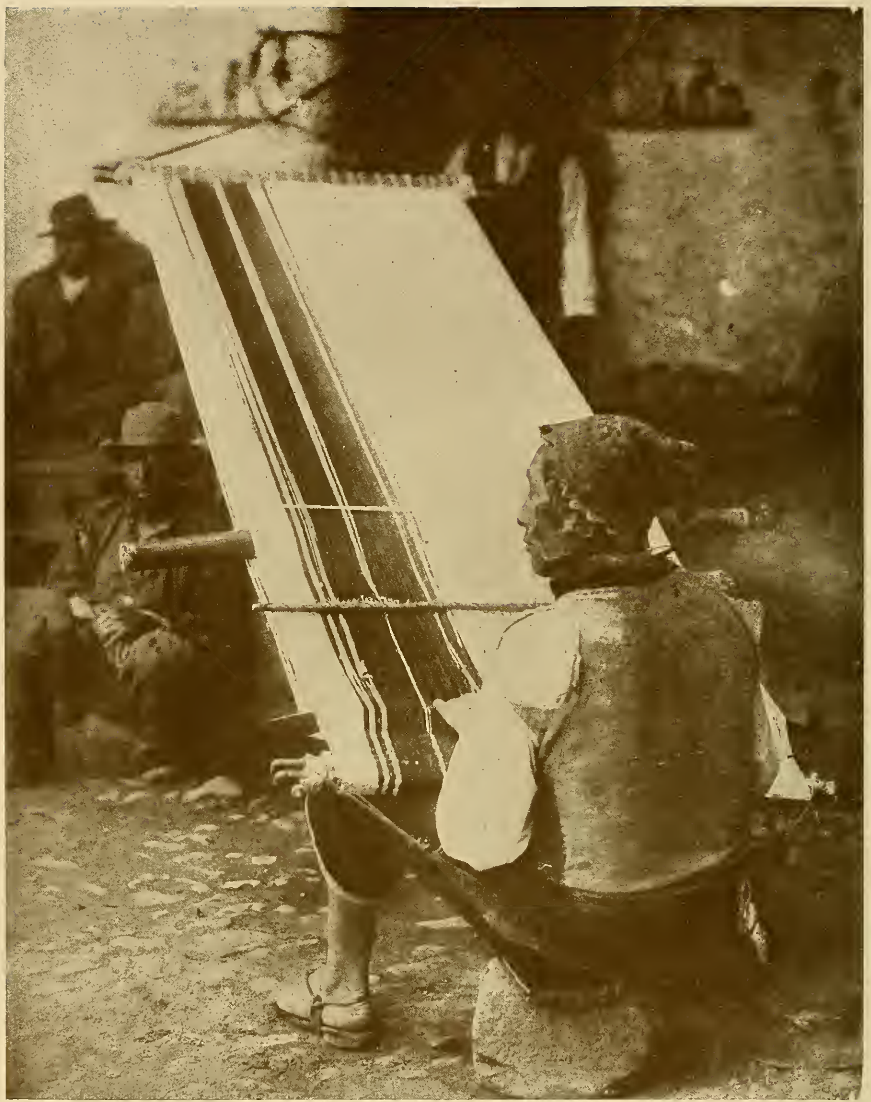
Cross—one can realize, as never before, that South America, in spite of countless retarding influences, has been steadily working out its destiny and progressing toward a great and brilliant future.

The foregoing paragraphs give but a faint idea of what Dr. Mozans has to say of the achievements of the Conquistadores and of their successors in our sister continent. To realize fully the promise and the potency of the Neo-Latin race, that is now exhibiting such activity in every sphere of material and intellectual effort, one must read the author's latest work, which has evidently been for him a labor of love.

AN ANDEAN STATION ON THE OROYA RAILROAD, PERU.

The highest point on the Oroya Railroad is in the Galera Tunnel, which pierces the watershed of the Andes at an elevation of over 15,600 feet. This line connects with the celebrated copper and silver mining district of Cerro de Pasco, Peru.

Space precludes our more than merely adverting to a few of the topics which, by reason of their novel treatment by the author, will,



Courtesy of National Geographic Magazine.

CUZCO, PERU. INDIAN WEAVING A PONCHO.

The best ponchos are of native weave and are made of alpaca wool. The head is thrust through a slit in the middle, and the ponchos are worn as a protection against both rain and cold. In order to get a sufficent width they are often woven in two or more strips.

we are sure, possess a special interest for all the readers of the BULLETIN. Among the most interesting of these are the Panama Canal, historically considered; the volcanoes of Ecuador, in the light of recent investigations; the Humboldt current and its effect on the west coast of South America; the megalithic ruins of Peru and the monuments of pre-Incaic civilization; the Children of the Sun and their cultural status; the language and the literature of the Quichuas and the Aymaras; the vast natural resources of the country and the splendid opportunities for investment; the rapid development of commerce and industry; and, above all, our woeful lack of enterprise in developing trade relations with countries which promise such rich returns and our playing into the hands of our commercial competitors by our failure to build up an adequate merchant marine. All these questions are discussed in a clear and interesting manner and afford much food for thought.

Outside of his kindly treatment by the people with whom he came in contact and of his favorable impressions of the countries visited, we have said nothing of the author's experiences or of the incidents of his long and remarkable journey. This we leave to the reader of Dr. Mozans's two charming volumes, "Following the Conquistadores," in which he will see many things pictured in a new light regarding the romantic land and hospitable people of what was once the great viceroyalty of Peru.

And yet more. Not only are the people and the country but also many questions connected with their past history exhibited in a new and, we are compelled to think, in their true light. Dr. Mozans has made an exhaustive study of the countries he describes, and the authorities he cites in support of many of his novel and at times startling contentions force us, willy-nilly, to revise many of our preconceived notions regarding many questions which have been in controversy since the time of the conquest.

We can not do more than indicate some of the questions discussed. Those who may be curious to see how the author defends his positions—and in view of the evidence adduced it seems impregnable—must read his book, which will well repay perusal.

In the first place, Dr. Mozans contends that ancient Peruvian civilization was of far greater antiquity than is usually supposed by those who accept the statement of Garcilaso de la Vega regarding the origin of the Children of the Sun and the alleged achievements of Manco Capac and Mama Ocllo. He seems to demand a cycle of civilizations for Peru like that which, according to the investigations of Flinders Petrie, must have obtained in Egypt and in other parts of the Old World.

Our author writes:

> To suppose that the culture, the religion, the military and social organization of Peru at the time of Huayna Capac [who died shortly before the arrival of Pizarro and his intrepid band] was the result of three or four centuries of Inca rule, would be to suppose what has never once occurred in any other part of the world. It would be tantamount to admitting that Charlamagne was the creator of modern civilization, independently of what had been accomplished ages before by Rome, Greece, Egypt, Judea, and Assyria. It would be equivalent to asserting that the people of ancient Peru were incomparably more highly endowed than the Greek or the Italian or the Hindu. For the development of a perfect and harmonious language like the Quichua, which is still spoken from Santiago del Estero to Quito and from the Pacific to the Ucayali, and the evolution of music and poetry like that which obtained wherever Quichua was spoken, and the creation of a system of civil and military administration, like that of the Incas, would in the Old World have required not three or four centuries, as Garcilaso would have us believe, but a period of time more nearly approaching three or four thousand years. To contend that less time would have been needed in the New World, where conditions were less favorable than in the Old, is to go counter to all the teachings of history and archeology and make claims that can not be substantiated by what we know of the progress of our race in other parts of the world.

THE STEAMER "SANTAREM" NEAR IQUITOS, PERU.

Iquitos, on the Maranon, the upper reaches of the Amazon River, is the chief fluvial Peruvian port. It is in direct steamship communication with the Brazilian river ports of Manaos and Belem (Para).

Again, as to the population of the Inca Empire at the time of the conquest, Dr. Mozans is convinced that it has been greatly overestimated and declares that—

> it is doubtful, notwithstanding what is usually asserted to the contrary, whether the population of this territory was ever as great before the conquest as it is to-day. The extravagant statements so often made regarding the teeming millions within the

dominions of the Children of the Sun before the arrival of the Spaniards—millions that we are asked to believe were almost exterminated by the cruelty of their conquerors—will not bear serious investigation.

More remarkable, however, are Dr. Mozans's statements regarding the number of lives lost at the time of the capture of Atahualpa. Certain historians assert that no fewer than 20,000 Indians were massacred on this occasion. Our author reduces the number to 300 or 400—

> while the total number of the natives who perished at the hands of the Spaniards, until the complete pacification of the country, was not more than 15,000 or 20,000—about one-tenth of those who fell victims to the ambition of the bloodthirsty usurper, Atahualpa.

Dr. Mozans is likewise of the opinion that we must materially modify our long-cherished opinions concerning the character of Inca civilization. He will have it that the Children of the Sun were not civilized in the proper acceptation of the term—that their culture-status was that of the middle period of barbarism—a status that was about midway between that of a Moqui pueblo and that of ancient Troy or a status like that which obtained among the lake dwellers of ancient Switzerland. We are told:

> There could be no progress, because the development of the personal will of the subject was impossible. No effort on his part, no industry, no intelligence, however highly developed, could ameliorate his social condition or contribute to his advancement. He was a slave utterly devoid of energy and individual initiative. He was an automaton, a simple pawn on the Inca's chessboard.

Regarding the famous Inca roads, about which such extraordinary accounts have been written from the time of the conquest until the present day, Dr. Mozans is more than skeptical. After a careful sifting of all the evidence regarding their existence, he comes to the conclusion that they were nothing more than ordinary Indian trails between neighboring tribes, most of which were made by the various tribes before the time of Inca rule.

> To construct two such roads as those described between Cuzco and Quito would, even to-day, exhaust, many times over, the resources of the Peruvian Government and baffle our most expert engineers with all the appliances of modern science and Yankee invention.

We must confess that we were quite disenchanted when we read these statements which are so at variance with those of Prescott and of the early chroniclers whom he quotes.

But if we were disenchanted by what our author says about the long-celebrated roads of the Incas, we must admit that we were positively shocked when we read that the Virgins of the Sun, whom we had always regarded in the same light as the vestal virgins of ancient Rome were, outside of the ñustas of the blood royal, "nothing more than a tribute in women exacted by the Cuzco tribe," and that the building in which such women were kept, far from being conventual in character, "were neither more nor less than storehouses sheltering a tribute of women." But immediately following

A RIVER SCENE NEAR MANAOS, BRAZIL.

this unexpected declaration is the proof of the startling assertion—a proof that we feel compelled to accept.

But we must conclude. If the reader wishes to peruse a work with a decidedly new flavor; if he desires to see many subjects connected with the past and present history of South America presented in an entirely new, and, we believe, in a true light, he will make haste to procure a copy of the fascinating work which has suggested the present article. He will find in every chapter something new, something that may be found in no other work in English, something that makes him yearn to visit the lands of which the author has given such graphic descriptions—those lands of mystery and romance over which is still cast all the glamor of the days of yore, and over which still hangs that strange spell which exercised so potent an influence over those adventurous spirits who went in quest of El Dorado and which enabled the Conquistadores to perform those deeds of high emprise which have rendered their names immortal.

Ex-President Roosevelt, in his admirable introduction to Along the Andes and Down the Amazon, expresses himself as follows:

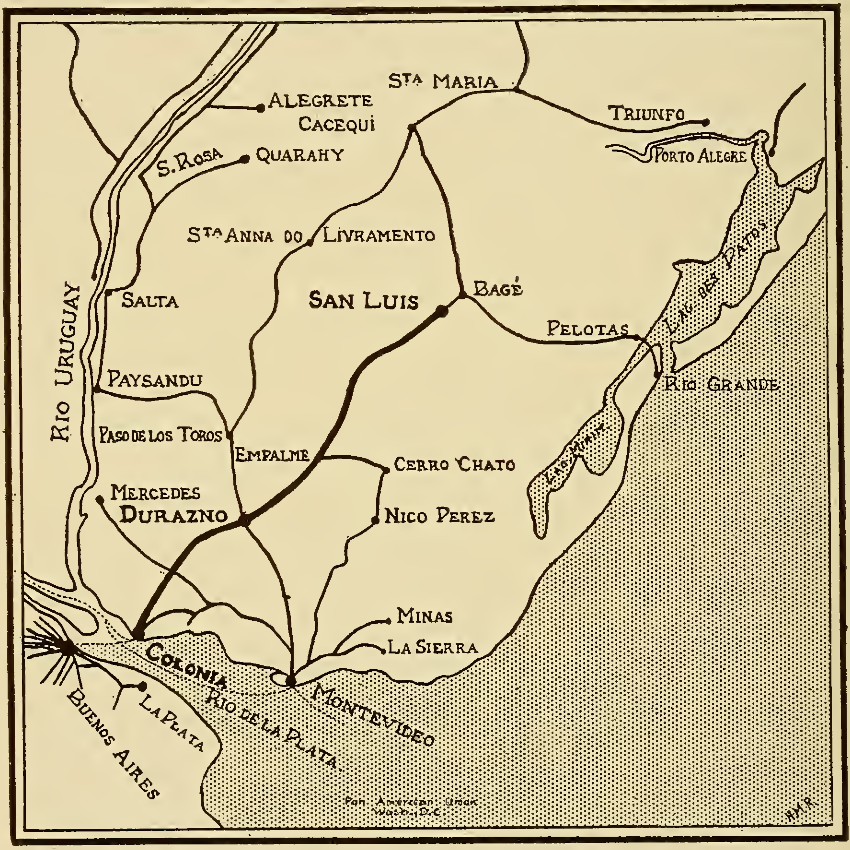
> In closing, I can only repeat again that this is a delightful book from every standpoint. It is an especially delightful book for Americans, because throughout it Dr. Mozans shows that he is so thoroughly good an American, so imbued with what is best in our national spirit, and with the thoughts of our greatest statesmen and writers, and, indeed, of all who have expressed the soul of our people. He is peculiarly fit to interpret for us our neighbors to the south; and he describes them with a sympathy, insight, and understanding granted to but few. Moreover, his feat was a really noteworthy feat, and it is told with vividness, combined with modesty and an evident entire truthfulness; and we should be equally attentive to what he sets forth as our accomplishments—for example, the digging of the Isthmian Canal and bringing order in Cuba—and to his allusions to our shortcomings, as shown by our ignorance and lack of appreciation of the great continent south of us and our failure to try to bring it and its people into closer relations with us.

Like Humboldt, Waterton, and Schomburgk, who have given us such charming narratives of their experiences in the southern continent, Dr. Mozans was quite at home in the lands he visited and always found his environment congenial and interesting. His latest work, we predict, will long be an acknowledged standard on the countries described—a book which every traveler to South America, especially every traveler to the west coast of the continent, will wish to have in his handbag. Be this as it may, the present writer can truthfully say that had he been able, on the occasion of a recent visit to Peru, to find a copy of this work, he would cheerfully have given $50 for it and that in so doing he would have saved many hundreds, as well as have spared himself long weeks of futile search in libraries and bookstores for information which is contained within the cover of this really valuable book. At that time, too, the precious bibliography at the end of the volume would have been a godsend to him and would have enabled him to do much more effective work in certain lines of research in which he was then engaged than was otherwise possible.

H. A. J.

URUGUAY AND THE PAN AMERICAN RAILWAY SYSTEM[1]

URUGUAY is a country small in area, not quite twice the size of New York State, but large in the importance it has in relation to South American development. Brazil to the north must cross Uruguay to get to the South American metropolis, Buenos Aires. Argentine to the south must use Uruguay's railways to find the shortest route—part rail, part sea—to Europe, England, and the United States, for the port of Pernambuco,



THE TRANS-URUGUAYAN RAILWAY FROM COLONIA TO SAN LUIS.

An additional link in the proposed Pan American Transcontinental Railway. This line, covering a distance of 365 miles, with an eastern connecting branch of 60 miles, is now being constructed by a United States syndicate.

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[1] By Señor Don José Richling, Consul General of Uruguay at New York.

Brazil, will some day take an importance as the terminus of a through-rail line from Buenos Aires and as the port of departure for a quick steamship service to the countries north of the Equator. With this in view Brazil is now spending millions upon harbor improvements at this point.

This through railway from Buenos Aires to Pernambuco has therefore something more than a South American significance. It becomes Pan American. In fact the great system of railways designed to bring about easier communication between the capitals and principal cities of all American Republics may be divided into two systems: (1) The main line following close to the backbone of the continent and connecting Argentina and the westerly Republics with North America through the Isthmus of Panama; (2) the transcontinental line linking up Chile and Argentina with the easterly Republics and thence via steamship line with North America.

That the transcontinental system will be completed long before the main line seems assured. Chile and Argentina have pierced the Andes and Valparaiso sends passengers and freight to Buenos Aires by the completed Transandine Railway. Brazil has pushed her steel highways nearly to the border of Uruguay.

While England and France have poured their capital into the building of these lines, which help to form the Pan American, it seems fitting that the United States should at last step in and complete one link in the chain which goes under the name Pan or All American.

It was left for the little Republic of Uruguay to bring about this desired result.

She granted to an American company concessions to build the line from Colonia just opposite Buenos Aires northeast to the San Luis River, a distance of about 365 miles, with a branch of 60 miles to connect with an existing line to the east.

Uruguay has found it good policy to encourage railway building by fair and liberal treatment of capital which ventures into such large undertakings. The Government has confidence in the future of Uruguay and is willing, therefore, to guarantee an interest earning upon a fair capitalization, believing that the country as it develops will make good and produce these earnings and more. Experience has shown such confidence to be well founded, and the existing railways are paying good returns to their shareholders. Uruguay, therefore, felt no hesitation in inviting capital from her sister Republic north of the Equator to enter the field.

How the invitation was accepted may be learned from an examination of the Uruguayan consular records. During the past three months, April, May, and June, a steady stream of invoices has passed through the offices. Thousands of tons of rails, bridge, and other structural steel, telegraph poles and wire, fence wire, cement, lumber, passenger cars, freight cars, and locomotives have left the port of New York headed for Uruguay. From Newport News the *Lovisa* cleared, a good-sized barkentine purchased by the Pan American Transcontinental Railway Co. to help out in carrying railroad ties and lumber. From New Orleans, on June 7, the *Wimbledon* steamed away, carrying the largest consignment of lumber which ever went out of that port. Over 50,000 ties and over 600,000 feet of yellow-pine timber made up her cargo.

All of these things are to help build the first American railway in the River Plata region. Inquiry has developed that the enterprise is one which is backed by business more than by banking interests in the United States. The work has been carried on quietly and steadily. The surveys were completed and submitted to the Government July 15, 1910. The winter and early spring were occupied in arranging for purchase of materials and equipment. Grading was begun at Durazno on March 6. That this event was regarded as of some international importance is exhibited in the telegrams which were exchanged at that time between the American Legation at Montevideo and the governor of the department of Durazno. They were as follows:

OAK TIES ASSEMBLED FOR SHIPMENT TO URUGUAY FOR PAN AMERICAN TRANSCONTINENTAL RAILWAY.

This represents the largest single shipment of lumber products ever made from New Orleans.

TELEGRAM SENT TO THE JEFE POLÍTICO.

DURAZNO, *March 6, 1911.*

Señor Jefe Político, Departamento Durazno, Don Juan Pedro Barriola:

La legación norte-americana felicita sinceramente al pueblo de Durazno y á su digno Jefe por el comienzo de los trabajos que realiza la compañía pan americana, los cuales implican grandes beneficios para el país.

EDWIN V. MORGAN.

[Translation.]

American Legation extends sincere congratulations to the people of Durazno and to the most distinguished Jefe (Chief) on the commencement of the work by the American Railway Co., which means a great benefit for the country.

UNITED STATES STEAM SHOVEL EN ROUTE FOR USE ON PAN AMERICAN TRANSCONTINENTAL RAILWAY.

TELEGRAM RECEIVED FROM JEFE POLÍTICO.

DURAZNO, *March 7, 1911.*

Ministro Norte Americano, Montevideo:

Agradesco finesa de V. E. y le retribuyó sincera felicitación con motivo comienzo de los trabajos que realiza, compañía pan americana cuyo acontecimiento he hecho conocer á la población de este departamento por medio de la prensa local. Lo saludo.

J. M. BARRIOLA.

[Translation.]

Appreciate your kindness and I reciprocate your good wishes on the commencement of the work by the Pan American Railway Co. I have conveyed this important news to the entire department through the press.

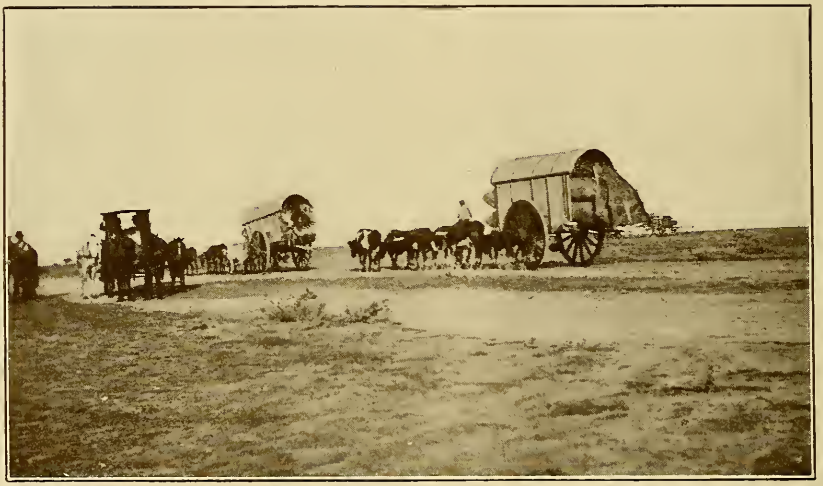
It is expected that the first section of 30 miles will be formally opened to public service in September, 1911, and that the entire line will be completed within four years.

It seems thus to be destined that Uruguay, of all the South American Republics, shall be first intimately known to United States capital. And as where one's capital is there lies one's interest, it seems not unlikely that Uruguay in its development may feel strongly the influence of American ideas and customs and perhaps be drawn into still closer national sympathy with the people of the United States.

In the physical characteristics of the country Uruguay bears a striking resemblance to parts of the United States. The rolling prairies and many streams of Illinois are there, as, too, is the rich, deep, black soil.

The peaches, grapes, and pears of northern Ohio find a natural home in the southerly portions of the country, and the sands of Colonia remind one of the sands of Lake Erie.

If the history of the development of the Middle West be repeated south of the Equator one can see Uruguay well peopled and well plowed, a prosperous country to live in and a fair one to look upon.



PRESENT METHOD OF FREIGHT TRANSPORTATION BETWEEN TRINIDAD AND DURAZNO.

These points are included in the Pan American Transcontinental Railway now building.

In the plans of the railway company the development of the port of Colonia plays an important part. It is understood that here will be established a center of distribution for imports to the River Plata region. Storage warehouses will make it possible for manufacturers to carry at trifling expense large stocks upon which they can call as needed for distribution in the Argentine or Uruguay or to up-river districts.

The natural depth of the water is such at Colonia as to make this one of the finest of harbors. The largest ocean steamers will be able to discharge their cargoes quickly and cheaply. Natural conditions, in fact, seem to have destined this point for one of the great shipping centers of the River Plata region.

This Pan American Railway has large significance for Uruguay, but it may mean even more for the United States. If it serves, as now seems quite possible, as the introduction of United States capital to this great South American region, and familiarizes United States investors with the sound and stable character of railway enterprise, as it has been and will be developed on this port of the new world, it will have accomplished quite as much for the Republic of the North as for Uruguay, and more perhaps for the general advancement of pan americanism than for either.

CUT NEAR DURAZNO, URUGUAY.

First Work upon the United States Section of the River Plate Railway.

PLAZA AT DURAZNO, ONE OF THE GROWING TOWNS IN THE INTERIOR OF URUGUAY.

RECEPTION OF THE NEW AMBASSADOR OF MEXICO

IT is again the pleasure of the BULLETIN to express its felicitations and to extend a cordial welcome to one of the new members of the governing board of the Pan American Union, Sr. Don Gilberto Crespoy Martinez, the newly accredited ambassador of Mexico to the United States. With the customary formalities attendant upon such occasions, President Taft officially received the ambassador at the White House on Friday, July 28, 1911. The remarks of Sr. Crespo, accompanying the presentation of his credentials, were characterized by expressions of the kindly feelings of the Government of Mexico toward the United States, and of the desire and hope for still closer associations both commerical and social.

Upon presenting his letter of credence, Ambassador Crespo said:

MR. PRESIDENT: I have the honor of handing you the autograph letter which accredits me as ambassador extraordinary and plenipotentiary of the Republic of Mexico to the United States of America and the letter of recall of my predecessor, Hon. Manuel de Zamacona, who has been called to serve another high post.

Peace, the logical consequence of the respect for all rights, obedience to the wise sentence that everyone must do his duty, leading humanity toward its moral progress, sincere and deep appreciation of high principles of equity and justice are, fortunately, the keystone of the friendly relations existing between your great Nation and my own.

This friendship has not only permitted but has given a great impetus to the development of the commerce of our countries, a commerce that is growing day by day, due to three important factors—our proximity and the facilities of communications, similarity of institutions, and essential differences between our respective productions.

Our commerce will be surely reenforced by that great attractive study of the psychology of our two peoples—a study that is being promoted in Mexico by teaching the English language in the schools—and there is no doubt it will spread, as also the study of Spanish in the leading colleges of the United States.

Those studies are of the greatest interest. They shall strengthen the already close ties between us, not only making impossible in the future the slightest misunderstanding, but increasing the bonds of good will of each for the other.

Prompted by these sentiments, it will be my great satisfaction that all my efforts shall, following the instructions of my Government, be directed toward the consolidation of our international friendship.

I greatly hope to attain success, trusting in the aid and facilities so kindly and cordially afforded by the Government of the United States of America to my distinguished predecessors.

In behalf of the people and Government of Mexico I express their heartiest wishes for your personal happiness and for the increasing prosperity of this great Nation, whose incessant progress all the world admires. And allow me, Mr. President, to join my own modest wishes in a friendly and most sincere way.

Accepting the credentials of the Ambassador, President Taft replied as follows:

Mr. AMBASSADOR: It affords me signal pleasure to welcome you as the ambassador extraordinary and plenipotentiary of the Mexican Republic and to receive from your hands the autograph letter accrediting you to me and to the Government of the United States of America, together with the letter of recall of your distinguished predecessor, Sr. Don Manuel de Zamacona.

I am especially impressed by the frank cordiality of the assurances you give of the purpose of the Government of the Mexican Republic, in fulfillment of its high mission as a Commonwealth founded on respect for the right and obedience to the moral precepts of international duty and to the sacred principles of justice and equity, to give even greater strength and permanence to the many close ties which happily exist between your great Republic and the United States. Your own efforts to this high end will find, Mr. Ambassador, the most sincere and loyal response on the part of this Government, which has no more ardent aspiration than to see its neighbor of the southern border affirm and develop the blessings of the peace which fortunately follows the era of tribulation through which the Mexican people have passed.

You rightly estimate, Mr. Ambassador, the closeness of the manifold interests and the unswerving loyalty of friendly purpose which have played so important a part in fomenting good will and mutual esteem between our two peoples, and I share your appreciation of the benefits to accrue to both nations by the solid upbuilding of the material relations of our peoples in the paths of commerce. A just reciprocal understanding of the sentiments and conditions on either side of the long line of demarcation between our two countries will surely tend to make that border what it should be—the political boundary where the sovereign rights of two great independent nations meet on terms of equality rather than a barrier to obstruct the beneficent exchanges wrought by the commercial and moral activities of two peoples who, differing in race and speech, yet feel a profound conviction of their mutual needs and cherish the desire to enlarge their wholesome intimacy to the uttermost. What you say about the teaching of our national tongue in the schools of Mexico is in point; it is a step toward that better knowledge of each other that works for the advantage of neighboring communities. On our side of the border the relation created during recent years between this country and the Spanish-speaking peoples of the Caribbean and the Far East have made the study of the Castilian language in our schools a matter not merely of interest to the student, but of necessity to the nation, and indirectly aids to that fuller intercourse with independent Latin America which is so much to be desired.

For you, Mr. Ambassador, besides the sincere cooperation of the officers of this Government in all that trends to the most ample development of good will between our two nations, I bespeak the personal cordiality of the community to which you come as an honored guest.

Finally, Mr. Ambassador, I ask you to assure your Government of the warmth with which this Government and people reciprocate the good wishes of Mexico and of our desire that peace, prosperity, and beneficial advancement may ever be the happy lot of the Mexican Republic.

RECEPTION OF THE MINISTER OF CHILE

THE BULLETIN OF THE PAN AMERICAN UNION has pleasure in taking this first opportunity to welcome, through its columns, Sr. Don Eduardo Suárez Mujica, the newly accredited Envoy Extraordinary and Minister Plenipotentiary of the Government of Chile to the United States. Sr. Mujica is to fill the post left vacant last winter through the untimely demise of the late and lamented Anibal Cruz, who had won such a distinct place for himself in the official and social life of Washington. The new Minister was officially received by President Taft at the White House on Tuesday, June 27, 1911. It is a pleasure to note, in the remarks which were made during the presentation and acceptance of the credentials, that gratifying note of respect and friendship which has always characterized the intercourse between the Chilean and the United States Governments.

In presenting his letter of credence, Minister Mujica said:

MR. PRESIDENT: By reason of the lamented demise of my honorable predecessor, to whose memory your Government tendered so high a tribute of love, the diplomatic representation of Chile in the United States has been placed in my hands whereby I am afforded the honor, highly gratifying to me, of residing near you.

I am coming to assume this high office at a time when the relations between the two Governments have attained a degree of special cordiality, and when the spirit of both countries appears to me to be imbued with the regard due to the qualities for which they are respectively distinguished. I believe, sir, that the United States now appreciates the steadiness, honesty, and integrity of the Chilean people as intensely as the conditions of moral and physical vigor of our great sister of the North are appreciated in Chile.

These are the relations, founded upon mutual esteem and a sincere sense of justice and respect for each other, that I am charged with the duty of cultivating and drawing closer with the utmost zeal however welcome and desirable to Chile the friendship of the United States always was.

I do not doubt that you will assist me in the better discharge of my duties with your high and efficacious support, as I trust that I may also rely on that of your coadjutors in the administration of the Government.

May you be pleased to accept my warm wishes for your personal happiness and the prosperity of the Republic.

I place in your hands the credentials which attest the representative character with which I have been intrusted.

President Taft replied as follows:

MR. MINISTER: By his courtesy and consideration, and by the many evidences which he gave of his friendship for the United States, your predecessor endeared himself to the officers of this Government. We could not but regret, therefore, his untimely taking off and the termination of the agreeable relations which we had with him. It is to me, however, a great pleasure that your Government should in the selection of his successor make choice of one so satisfactory to this Government as yourself, and I am happy to receive you as its envoy extraordinary and minister plenipotentiary near the Government of the United States. I have no doubt that you will so conduct the affairs of your mission as to win the good esteem of all having official relations with you, and will thus promote the good feeling between the United States and Chile, which it is so desirable to preserve and strengthen.

The Government of the United States has regarded with gratification the material growth and prosperity of the Republic of Chile, the integrity of its people, and the evidence which they have given of their love for constitutional and stable government. For such a people the Government and people of the United States could have none but high esteem and great respect.

The laudable aims and endeavors, which you assure us you have in view, of bettering the understanding and drawing still closer the cordiality of intercourse between this people and the people of the United States, are responsive to my own desires, and in the accomplishment of these beneficial results I and the officers of this Government will be happy to give you our hearty cooperation.

Thanking you for you kind personal good wishes, I bid you welcome to Washington in the hope that you will find your sojourn among us pleasant and agreeable.

PROMINENT IN PAN AMERICAN AFFAIRS ⁂ ⁂ ⁂

THE BULLETIN can not repress the desire to manifest its extreme gratification at the continued ability to present through its columns the biographical sketches and portraits of individuals who have become prominent in Pan American affairs. The accompanying group is especially noteworthy for the diversity of interests represented, and reveals in a manner distinct and unmistakable that the ties of friendship and sympathy between the American Republics are not alone those actuated by commercial intercourse, but embrace a still broader and deeper relationship—that of interest in the peoples themselves, the customs, and institutions of the countries comprehended in the Pan American Union.

(Harris-Ewing photo.)

SENATOR WILLIAM PIERCE FRYE.

In passing, the Pan American Union takes advantage of this opportunity to express its profound sorrow and heartfelt sympathy at the untimely removal from the midst of careers of activity and usefulness three persons of note and ability, Senator William Pierce Frye, from the State of Maine, Dr. Nicolas Palacios, of Chile, and Willard Parker Tisdel, of Washington. The demise of these, occurring within a short period, is a shock which will indeed be felt by all who have followed the endeavors of these lamented leaders in their efforts to foster and develop the interests of Pan Americanism.

SENATOR FRYE, a great friend of Latin America, and to whose activity was very largely due the creation of the Pan American Union, was born at Lewiston, Me., September 2, 1830. He was graduated from

Bowdoin College, Maine, in 1850, studying and practicing law as his profession. Elected a member of the State legislature, he served during 1861, 1862, and 1867; was mayor of the city of Lewiston in 1866 and 1877, and attorney general of the State of Maine from 1867 through 1869. He entered Congress in 1871, serving for 10 years, when he was elected to the Senate, on March 15, 1881, to succeed Mr. Blaine. He was in active service there until the date of his death, August 8, 1911. Senator Frye was very prominent in the Senate during his long career, and for many years was chairman of the Committee on Commerce. During this period he studied international affairs, and was an authority on foreign questions.

His particular interest in Latin America influenced the Senator in presenting bill No. 623, which was introduced in the Senate December 13, 1887, and was followed by a bill, No. 1473, introduced into the House of Representatives by Congressman McCreary, of Kentucky. These bills originated the law by which the President called the meeting of American nations in Washington, known as the First Pan American Conference, under President Harrison, the Secretary of State, James G. Blaine, being the presiding officer. This conference established what has now become the Pan American Union, and Senator Frye was always helpful in its progress and rejoiced in its success.

DR. NICOLAS PALACIOS.

There has recently died in Chile one of their most noted students, most talented physicians, a man who, moreover, besides his intellectual attainments and his scientific enthusiasms, possessed to a remarkable degree that spirit which lifts great men above their generation and into immortality—the spirit of intense and unquenchable patriotism. This national figure among the noted men of Chile was Nicolás Palacios.

Palacios passed his childhood in the little village of Santa Cruz, in the Province of Curico, south of Santiago. He was even then distinguished for his earnestness, and this characteristic developed when he went to Santiago to fit himself for his future career. Choosing medicine for his life work, he had been but a few weeks in the university before the outbreak of the war between Chile and Peru, in which he enlisted and served as surgeon. Obtaining his medical degree he decided to settle in the nitrate region, and there he remained for the best years of his life, devoted to his work and storing up experiences which strengthened his love for and faith in the race which had from earliest times occupied Chile. His patients, and they were many, composed of laborers for the most part, worshiped him, and he in turn was aroused to admiration for the sturdy character of the Chileno and his progenitor, the Araucanian Indian. He went to Europe to continue his studies on this subject and finally, after mature preparation, he issued in August, 1904, his celebrated book called "Raza Chilena. Libro escrito por un chileno i para los chile nos" (The Chilean Race. A book written by a Chilean for the people of Chile). This was and is the inspiration for much of the later-day patriotism that is becoming dominant in the Republic. Palacios is acknowledged thereby as a great national hero, as one of the spiritual and intellectual geniuses of his native country. He did other things, and did them well, but it was patriotism which makes him immortal. On his death the whole nation mourned. Tributes of love and respect were paid his name in all parts of the country and his library, which he gave to the nation, was publicly accepted by the Government, and set aside for the use of the people in his honor forever.

WILLARD PARKER TISDEL.

Willard Parker Tisdel, for many years a captain of industry in Latin America, was born in Madison, Ohio, July 27, 1843. He was educated in the public schools and at Union College, and entered the Army April 20, 1861, in the Seventh Ohio Infantry, seeing active service, and at the end of the war becoming assistant marshal of the

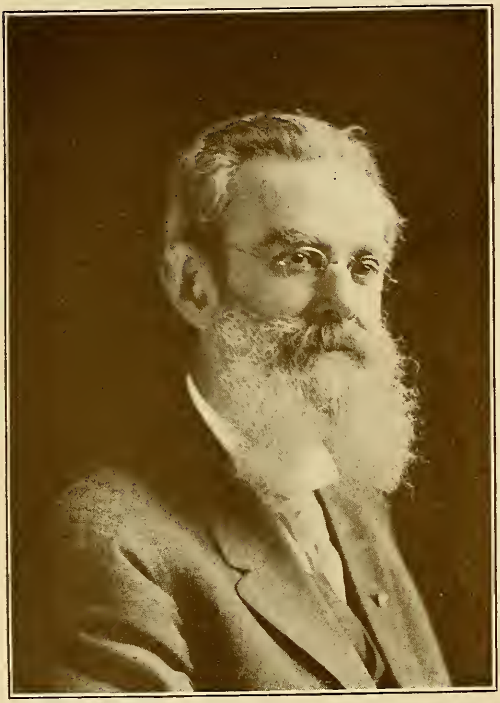
United States Supreme Court. At one time (1884) Col. Tisdel was sent, as confidential agent of the Department of State, to the Kongo Free State, and carried out his mission so well that Secretary of State Frelinghuysen personally commended him in a special cable message. His connection with and interest in Latin America began shortly after the war when he joined the Pacific Mail Steamship Co. and became their general agent on the Pacific coast. He had at one time been offered by President Cleveland the post of minister to Ecuador, but did not accept. In 1892, as World's Fair commissioner for the Department of State, he visited every country in Latin America, securing their cooperation in the exposition, and learning himself to have a high regard for their ambitions and customs. Having acted as manager of the Panama Railroad and, after obtaining from the Brazilian Government the subsidy for the Brazil Mail Steamship Co., as manager for that line, his knowledge of transportation matters was very great, and in 1894 he went to Guatemala as representative of the Pacific Improvement Co. under Mr. C. P. Huntington, and there he took charge of the Guatemala Central Railroad, remaining with the company until his death, although his end came at his home in Washington, June 21, 1911.

SIR CLAUDE COVENTRY MALLET, K. C. M. G.,
British Minister to Panama and Costa Rica.

It is with real satisfaction that the portrait of Sir Claude Coventry Mallet, K. C. M. G., British minister in Panama, is reproduced in this issue. Sir Claude is one of the best men in the foreign service of the British Government, and has made an enviable record at Panama. The great interest which the British Empire, as the leading shipping nation in the world, has in the canal, and the fact that the large majority of the employees of the Canal Commission are British subjects from Jamaica, make the post of British minister at Panama one of exceptional delicacy and importance. Sir Claude has so administered his duties, and has so conducted his relations with the

Government of Panama and with the Canal Commission, that he has won the esteem of both the Governments of Panama and the United States and has merited the high honor done him by his own country when it knighted him. The Pan American Union takes advantage of this opportunity to congratulate Sir Claude upon the recognition which his Government recently gave him in raising him to knighthood and on the excellent work which he has done as British minister at Panama.

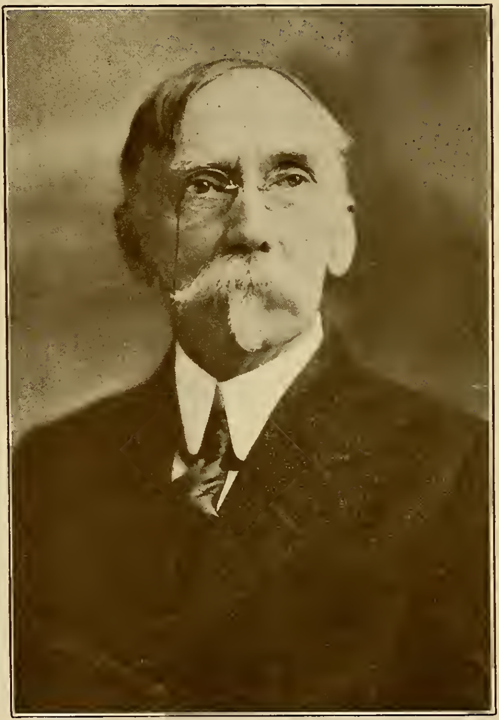
Sir Claude was born on April 20, 1860, and received his early education and training at Brighton College. At the age of 24, he was appointed vice-consul at Panama; in 1885 he was transferred to Colon and succeeded to the consulate in 1888. In 1891 the Departments of Panama, Cauca, Bolivar, and Magdalena were added to his consular district. During the next few years Sir Claude acted as chargé d'affaires at the British legations, respectively, in Lima, Quito, and Bogota. In 1908 he was appointed minister resident and consul-general to Panama and Costa Rica, of which important posts he is still the able incumbent.


(Harris-Ewing photo.)

COL. LOUIS HENRI AYMÉ,

United States Consul General at Lisbon, Student of Latin American Archæology.

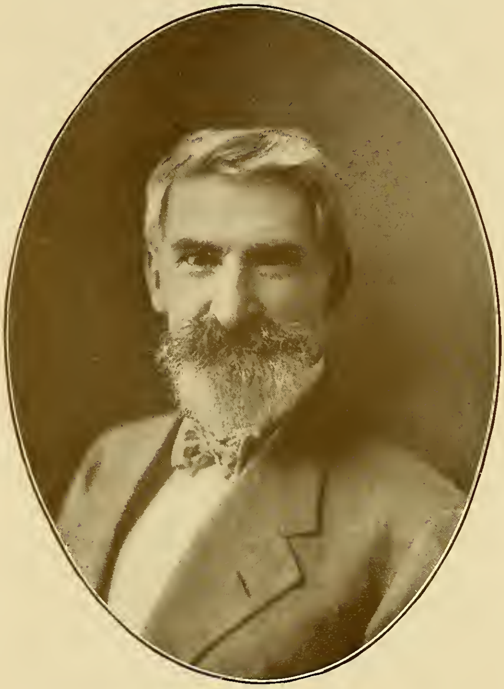
Colonel Aymé, whose story on Mitla appears elsewhere in this issue of the Bulletin, was born in New York City May 29, 1855. He was graduated from Trinity School and Columbia College, and joined the scientific expedition to New Zealand sent by the United States to observe the transit of Venus in 1874. Appointed as American consul at Merida (Mexico) in 1880, he remained there till 1884, becoming special ethnologist for the Smithsonian Institution, at Oaxaca, Mexico, 1884 to 1886. He then engaged in active newspaper work in Chicago until 1891, and was foreign press editor at the World's Fair until the end of 1893, resuming his earlier newspaper position up to and through 1897. He served as American consul at Guadeloupe, French West Indies, from January 6, 1898, to June, 1903, and it was during this term that he reported, being assigned to the duty, under the Associated Press, by the Department of State, the awful disaster of Mount Pelee on the neighboring island of Martinique. For the heroic service on this occasion Col. Aymé was applauded by the whole civilized world. He was appointed consul at Para, Brazil, June 26, 1903, and later consul general at Lisbon, Portugal, May 24, 1906, the post he still holds. In addition to his numerous reports and monographs resulting from the official work in which he has been engaged, Col. Aymé has contributed liberally to periodic literature on scientific topics, his field being that of ethnology and archæology. His activity in the Martinique catastrophe can never be too frequently told. As soon as it was learned in the United States that an eruption (which occurred on the evening of May 3, 1902) was taking place near St. Pierre, Col. Aymé chartered a boat, and after a thrilling and dangerous night, running through a thick cloud of falling cinders and ashes, arrived at the ill-fated city. The appalling character of the disaster was disclosed to him, but without an instant's hesitation he went over the blazing field, gathered the awful details, wrote his story, returned to Guadeloupe, and cabled the message to New York so as to reach the papers on the morning of May 11, 1902.


(Harris-Ewing photo.)

MAJ. JOSEPH ORTON KERBY,

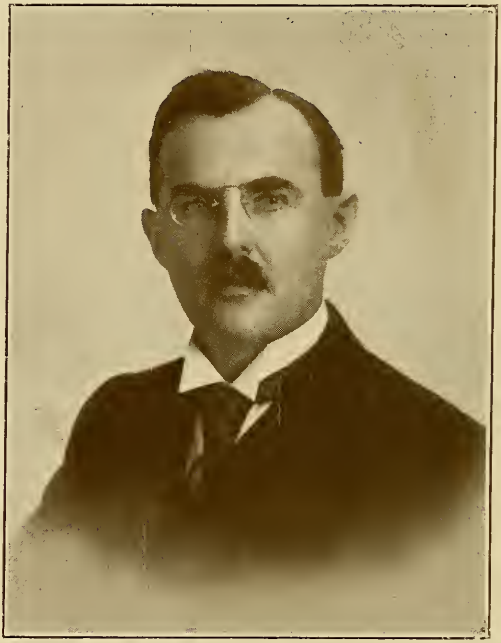
Investigator of rubber resources of Latin America.

Major Kerby, who has long been active in Latin American affairs, was born in Fort Loudon, Pennsylvania, February 4, 1841. His father had been an officer in the British Navy, and it was from this parent that Maj. Kerbey inherited his love of the sea and of travel. When a boy he learned telegraphy in the offices of the Pennyslvania Railway, and the expert knowledge gained by this experience led to a call for him, by Secretary of War Scott, to become a telegrapher in the service of the Army, which he joined in 1861. He served through the war, riding with Custer in the Army of the Potomac as telegraph scout, and resigned in 1865. He then became press telegraph reporter in the Senate gallery. In 1889 he was appointed by Secretary of State James G. Blaine as consul to Para (Belem), Brazil, with explicit instructions to investigate the product of india rubber in that part of the world, and the probable uses of it in the future. In 1891, having resigned this office, he returned to South America for private commercial interests, went up the Amazon River, crossed the Andes to Pacasmayo, in Peru, and came back to the United States along the west coast and across Panama. In 1894 he was again sent, in the employ of heavy rubber investors, into Brazil, but on this trip he went first to Buenos Aires, then across the Andes (by mule) to Santiago, Valparaiso in Chile to Mollendo, in Peru, and again across the mountains through La Paz, Bolivia. From here he worked his way through the wilderness, on horse or mule back, in canoes, on foot or floating on rafts in the Ucayali, Marañon, and Amazon Rivers to Manaos and Para. In 1897 he was on the Isthmus of Tehuantepec studying rubber cultivation, and in 1898 he made a third trip to the Amazon region, for the same purpose. During the war with Spain he joined the Army in Cuba by approval of President McKinley and Secretary Hay, 1899-1900. Maj. Kerbey resumed newspaper work in 1901, but was attached to the staff of the Pan American Union in 1907. While with the Pan American Union he made one trip to the Amazon, in 1908, and on resigning in 1911 he made still another. Maj. Kerbey plans to retire from active life, and to spend the more rigorous months of the year in pleasant Barbados, although he will always call Washington his home. Besides numerous reports on his travels, Maj. Kerbey is the author of three books, the Boy Spy, The Land of To-morrow, and An American Consul in Amazonia, in which he has given to the world his varied experiences both during the Civil War and in South America.


ALONZO B. GARRETT,
United States Consul at Nuevo Laredo, Mexico.

Alonzo B. Garrett, who, in point of service, holds the distinction of being one of the older consuls accredited to Latin America, was born in Lavalette, West Virginia, January 20, 1847. His present residence, however, is Shoals, West Virginia. Mr. Garrett attended the public schools of his native State and Kentucky, and later entered the Eclectic Medical Institute, of Cincinnati, Ohio. At the outbreak of the Civil War, he enlisted in the Forty-fifth Kentucky Volunteer Infantry, serving as drummer boy and later as corporal. At the end of his enlistment, Mr. Garrett spent three years teaching schools in Kentucky and West Virginia. In 1873 he began the practice of medicine in Ohio and continued in his profession there for 15 years, when he returned to his home State. Here he was honored with a seat in the State Senate of West Virginia, during 1897-1900. Upon his retirement, Mr. Garrett was appointed to the position of United States consul at Nuevo Laredo, State of Tamaulipas, Mexico, as a result of an examination. He accepted the post in 1901, and is still proving himself an efficient incumbent.

Louis Hostetter, the present occupant of the United States consulate at Hermosillo, has been the incumbent of that post since 1905. Born in the city of New York, August 14, 1859, he attended the grammar and high schools of his native city and then the College of the City of New York. In the fall of 1876 Mr. Hostetter went to New Mexico, where he engaged in the manufacturing and general merchandise business. After a residence in New Mexico of over a quarter of a century, he again changed his abode to Omaha, Nebraska, and continued in the manufacturing business until 1905, when, as a result of an examination, he accepted an appointment as United States consul to his present post at Hermosillo, Mexico.



LOUIS HOSTETTER,
United States Consul at Hermosillo, Mexico.

(Harris-Ewing photo.)

PHILIP E. HOLLAND,
United States Consul at Saltillo, Mexico.

Philip E. Holland, the present consular representative of the United States at Saltillo, was born in Murray, Calloway County, Kentucky, August 26, 1877. He later removed to Jackson, Tennessee, of which place he is now a legal resident. Mr. Holland received his elementary education in the public schools and then attended McFerrin College, Martin, Tennessee, for two years. He left this institution to teach school for a year and returned to complete his education at the Southwestern Baptist University. Here he spent three years, and in 1902 was graduated from the law department of the university. For eight years Mr. Holland enjoyed an active practice in his chosen profession before the courts of Tennessee, and on March 7, 1910, was tendered the post of consul at Puerto Plata, as a result of an examination. Of this important port in the Dominican Republic, Mr. Holland was the able incumbent until August, 1911, when he was transferred to the consulate at Saltillo, State of Coahuila, Mexico.

BOOK NOTES

The Columbus Memorial Library has been the fortunate recipient of many books issued lately from the publishing houses of the Republics of Latin America. It is worthy of remark that the great majority of these books are well printed, that they bear the stamp of careful, well-trained editorial supervision, and that every indication, from the mechanical make-up of the books themselves, and especially from the subject matter presented to the reader on the printed page, points to the great intellectual vigor characterizing the reading public which these books are intended to reach.

Trabajos del Cuerpo de Ingenieros (Report of the Corps of Engineers appointed to Prepare Data for a Physical and Political Map of Venezuela). Imprenta Bolívar, Caracas, 1911. Small quarto, 483 pages, with cover envelope containing drawings and photographs.

The book is quite technical, and numerous pages are given to mathematical formulæ and computations or measurements of one kind and another. It is thoroughly scientific on that account, and should prove a mine of information to the student. Its purpose is in accordance with a Government decree of June 14, 1909, by which it was planned to prepare a map of Venezuela, on a scale of 1 to 1,000,000, in celebration of the one-hundredth anniversary of the declaration of independence in 1911. The map, when completed, will to all practical intents correspond with the map of the world projected by the International Geographic Congress at its meeting in 1908.

El Tâchira físico, politíco ê ilustrado (The State of Tachira, Venezuela, in its Physical, Economical, Industrial, Social, and Political Aspects). By Emilio Constantino Guerrero. Tipografía Herrera Irigoyen & Ca., Caracas. Octavo, 306 pages. Price, 5 Bolivares ($1).

This is a careful descriptive analysis of one of the richest but least known States of Venezuela, and contains an abundance of just that information which adds so much to the resources of the student who is seeking knowledge prepared at first hand. The author is a resident of the State, and has devoted years to the collection of his material. He has chapters on the early history of the region; on the aboriginal inhabitants; on the geography and other physical conditions; the cities, towns, roads; agricultural, mineral, and other products of the land; on the social characteristics of the present inhabitants; and finally there is a descriptive chapter devoted to each district of the State.

Saneamiento de la Ciudad de Caracas (Sanitation of the city of Caracas). By Dr. L. Razetti. An analysis of sanitary and hygienic conditions, presented to the First Venezuelan Medical Congress, held in the city of Caracas, July 24, 1911. Octavo, 80 pages. Caracas, Tipografia Americana, 1911.

Dr. Razetti is one of the most distinguished members of the medical profession in the Republic of Venezuela, and is in fact recognized far outside his own country for his scholarly attainments and for his authoritative attitude on the great problems of national hygiene. He was a delegate to the Fourth International Sanitary Conference in Costa Rica (1910), and occupies positions of high rank in Venezuela. While the author's criticisms are sometimes severe, they are given to lay a groundwork for radical and permanent improvement. No essential for drainage, pure water, fresh air, healthy climate, and abundant food supply, is lacking in the city itself or its environs. Actions along modern lines will readily make Caracas one of the finest and most beautiful cities of the western world.

El Clamor de un Pueblo (A Popular Outcry). Economic studies on public questions in Venezuela. Federico Salas. Volume I. Duodecimo, 124 pages. Maracaibo, Imprenta Moderna, 1911.

This booklet attacks certain traditional misconceptions of government, and applies the principles of modern economy to Venezuela. It is but the beginning of a series of essays on industrial and social reforms which the author hopes to help introduce into his country. The value for the foreign reader lies in the many instances of fact about agricultural and other conditions within Venezuela, and the several specific instances he gives of farm and day labor there.

Genealogía de la Familia del Liberatador, Simón Bolívar (Genealogy of the Family of the Liberator, Simon Bolivar). By Felipe Francia. Duodecimo, 30 pages and 1 plate of the family tree. Caracas, Tipografía Emprenta El Cojo, 1911.

As the year 1911 was the centenary of the signing of the declaration of independence of Venezuela, it was fitting that such research as is embodied in this volume should be made for publication at that time. Trustworthy records are at hand by which the family of Bolívar can be traced in Venezuela, through the city of Santo Domingo in what was once called the island of Espanola, a part of which is now the Dominican Republic, and back to the place known as Bolívar, near the village of Marquina Vizcaya in (the Basque Provinces) Spain. The records go back with accuracy as far as some years before 1570. The first Bolívar was not necessarily the first member of the noble family from which he sprang, but as it was a custom at that time for a son to assume a name for himself if so minded, the name Bolívar originated in this manner. The genealogy is quite complete, and is supplemented by another of the mother of the liberator.

El Panteon Nacional (The National Pantheon). In Caracas, Venezuela. Octavo, 30 pages with a photograph of the building. Tipografía Emprenta El Cojo, Caracas, 1911.

The Pantheon in Caracas is of itself one of the most attractive and interesting of the public buildings in that beautiful city, but since it became the repository for the remains of national heroes, it has an additional value to the visitor and historian. This pamphlet, therefore, prepared for the centenary of Venezuela's independence, is a timely account of the structure which was originally the Church of La Santísima Trinidad of Caracas, and contains a list of the heroes (56) of the struggle for independence and of other celebrated citizens (32) who are buried there. A short description of the monuments within the Pantheon is also given. The church was designated as the National Pantheon at the time when it received the remains of Bolívar (1876).

La Cooperación de Mexico en la Independencia de Centro America (The Cooperation of Mexico in the Independence of Central America). With particular reference to the activity of Gen. Vicente Filisola. Octavo, 340 pages. Mexico, Librería de la Viuda de Ch. Bouret, 1911. Price 75 cents gold.

Under the able editorship of Sr. Genaro García, this series of documents, all being exact transcriptions of original manuscripts dealing with the history of Mexico, has reached its thirty-sixth volume, and Sr. García, in a modest preface, expresses the fear that he may not be able to continue their publication, as the support extended him and his work may not justify further financial outlay. It is a great regret that such a misfortune is possible. This series is so valuable that its discontinuance will surely be a loss to the world of letters in general, and, particularly, to such students as are giving particular attention to Mexico. Begun in 1905 with the first volume containing hitherto unedited correspondence relating to the conspiracy of 1860, the volumes have followed one after the other until this last publication, dealing (as did the preceding number) in an intimate way with the forces at work between Central America and Mexico during the early years of independence. There has been no consecutiveness intended in these volumes, for they appeared as often as the originals could be prepared for the press; they can not be uninterruptedly read, for they make no claim to have in themselves literary charm, proportion or purpose. In fact, they are not history, they are the raw material from which history is written, but for that very reason they are of inestimable value. That statement is true even to-day, but when another generation or so has passed, when original documents, faded now, may have become indecipherable by time and so have forever escaped man's investigation, it may well be intensified. Sr. García ought to be encouraged to continue his scholarly work, for if these "Documentos para la Historia de Mexico" cease, much of what is precious in the annals of the country may be sacrificed.

Desde el Llano (From the Open). A narrative by Nicolás Augusto Gonzalez. Guatemala, Tipografía Sánchez & de Guise. Octavo, 68 pages.

While the subject matter is of rather local than general interest, dealing as it does with political questions relating to the Republic of Guatemala and other countries of Latin-America, yet as the title, the plain truth, implies, there is much of value in this little book for the student of contemporary affairs. One complaint made by the author is well justified. He states that even the trivial happenings of Europe receive detailed descriptions in the newspapers of to-day, but that great movements in Latin-America are ignored, or only the so-called revolutions noticed, no effort being devoted, as a rule, to an impartial analysis of their causes.

La République d'Haïti. Telle qu'elle est (The Republic of Haiti). With chapters on its history, geography, ethnography, politics, administration, agriculture, fauna and flora, economy, means of communication, mines, and additional matter on the people and their customs. By Sténio Vincent, Government commissioner from Haiti to the International Exposition at Brussels. With 73 illustrations, 5 color plates and a map. Octavo, 366 pages. Bruxelles, Société Anonyme Belge d'Imprimerie, 1910.

Information, in any systematic form, about this interesting island of Haiti, for such was the Indian designation of the whole island discovered by Columbus in 1492, has not been easy to obtain. This large and well edited book supplies that lack, and offers to the investigator a résumé of facts about the Republic of Haiti which will always be useful. The compilation was finished late in 1910, in response to the desires expressed by many visitors to the pretty Haitian pavilion at the Brussels exposition, and to meet, as the author himself says, the ignorance shown by not a few of these visitors concerning general and specific conditions in the Republic. It undoubtedly has received the authoritative support of the Government, and the tables scattered throughout the book may be therefore taken as practically official.

Quelques Renseignements sur la République Argentine (Some notes on the Argentine Republic). By Dr. Daniel Antokoletz. Octavo, 142 pages. Buenos Aires, Imprenta Juan A. Alsina. 1911.

An immense collection of facts is given in this publication in French, most of them taken directly from official sources, and all of reference value. While the tables and compilations are accessible in Spanish, English, and other books, one series of tables, giving on pages 63 to 88, the scale of wages current two months (July and August, 1910) is so exact and clear that special attention should be called to it.

Der Neger in den Vereinigten Staaten von Nordamerica (The Negro in the United States). By Moritz Schanz. Octavo, 133 pages. Essen, G. D. Baedeker, publisher, 1911.

The author has restricted himself in this volume to a discussion of conditions in the United States alone, so that the interest in the problem is narrowed to that area. As he mentions, however, that of the 24,000,000 negroes in all America 10,000,000 are in the United States, he must believe that the remaining 14,000,000 are in the rest of the Hemisphere. It would be worth his while to prove it.

Relatorio do Serviço de Propaganda e Expansão Economica do Brasil no Estrangeiro. (Statement of the Foreign Service of the Propaganda for Economic Expansion of Brazil.) Report made to the minister of industry, communication, and public works by the national director, Dr. Luiz Raphael Vieira Souto on March 15, 1909. Octavo, 52 pages. Imprensa Nacional, Rio de Janeiro, 1909.

It is perhaps not so well known as it should be that Brazil maintains in several foreign countries—Germany, France, Italy, England, and Portugal—agents of the official organization of the Government, whose duty it is to give popular information regarding the country, its natural resources, its advantage for immigrants, and its opportunities for those desirous of entering into closer relations with it. While this is only a formal report of the Government official in charge of the propaganda work, it is valuable as showing what was accomplished during the year, the steps taken to aid this economic expansion, and who were the foreign representatives of Brazil in such work.

Aspectos de um Problema Economica; Navegacãoe Colonisacão na Bahia. (Studies of an Economic Problem; the Navigation and Colonization in the State of Bahia, Brazil.) By Elpidio de Mesquita. Octavo, 279 pages. Rio de Janeiro, Typographia Leuzinger, 1909.

In line with the propaganda of the advantages of Brazil, as indicated in the notice of the publication mentioned above, there is an immense amount of study given by both official and unofficial authorities devoted to consideration of internal improvements within the country itself. The present volume is dedicated to the problems stated in the title, navigation and colonization of the State of Bahia, and discusses with great minuteness the present aspect of that region, its physical characteristics, and particularly the means of transportation along the coast by railways and rivers, and especially the use which the State makes at present, and should make in the future, of that splendid natural artery of commerce, the River Sao Francisco. A good map of Bahia is inserted at the end of the volume.

Nossa Marinha (Our Navy). Notes on the progress of the fighting marine of Brazil during the years 1906 to 1910. By Arthur Dias. Rio de Janeiro, Officias Graphicas da Liga Maritima Brazileira-Avenida Gomes Freire, 1910.

This semiofficial publication has a vast array of facts to place before the reader. To aid him, however, are very many photographic illustrations of the vessels of the Brazilian navy, of the places mentioned in the text, and of certain marine conditions pertaining thereto. Of still greater value, also, are the numerous colored plates of flags of Brazil and other nations; of these plates there are 17, but in addition 4 other colored plates give the signal system used in the Brazil navy, 2 give the uniforms, 2 the characters of buoys adopted for the harbors, and 1 map of the coast is presented in colors, with marks where some means of illumination are employed. The text is divided into 14 chapters, and discusses the navy in all aspects, beginning with a historical note and ending with an analysis of the place to be occupied by Brazil's mighty *Dreadnoughts*—the *Minas Geraes*, *S. Paulo*, *Rio de Janeiro*, and *Riachuelo*. The author, who is already well known for his contributions to the literature of Brazil, deserves the thanks of the world for this valuable addition to our knowledge concerning that Republic.

Early (Spanish) Voyages to the Strait of Magellan. Works issued by the Hakluyt Society. Second series, No. XXVIII. Translated and edited with a preface, introduction, and notes, by Sir. Clements Markha, K. C. B., vice president of the Hakluyt Society. London, printed for the Society, 1911. Octavo, 288 pages.

As is stated in the preface, the early voyages to Magellans Strait have always received attention from the society, that of Magellan himself, of Drake, Sarmiento, Hawkins, Davis, Speilbergen, Le Maire, and Schouten having been published by it. This volume contains the voyages of Loaysa and Juan Sebastian del Cano, of Alvarez de Sayavedra, of Alcazaba, and of the Nodals; notes and related manuscripts are added when obtainable. Reading these old sea travelers' tales, true as they must be and unembellished, either in the original Spanish or the closely translated English, by tricks of literary style, is to go back over the almost four centuries since these voyages were undertaken, and to come face to face with what these navigators and explorers accomplished. The simple truth herein told surpasses the wildest romance of modern fiction.

The Cartago Earthquake. May 4, 1910. Octavo, 52 pages, 51 illustrations. San Jose, Costa Rica. Imprenta de Antonio Lehmann, 1910.

While the horrors of this disaster are given in pictorial and verbal details, the scientific aspects of the earthquake are carefully presented, and the data thus collected are preserved for future service. The text is in both English and Spanish, although the one is not a translation of the other. The publication is part of the Magazin Costarricense, and is a commendable example of what can be produced in that enterprising country.

A Trip—Panama Canal. Quarto, 168 pages and 700 illustrations. Published by Avery & Garrison, box 152, Panama City, and at 724 Perdido Street, New Orleans, La. 1911.

This is a pictorial history of the canal from the early French days to the present time. The information given is undoubtedly correct, because it has been approved by those in authority to do so, and certainly never before has a task been more satisfactorily accomplished, for the reader, or rather the spectator, can follow through the pages all stages of the canal and many correlated conditions on the Isthmus. The volume is intended as a souvenir of the canal, and is sold either direct from the publishers or by most book dealers in Panama. The price is given at $3, but unfortunately it is not specified whether in Panama ($1.50) or United States gold.

Uruguay. By W. H. Koebel. With a map and 55 illustrations. London, T. Fisher Unwin. New York. Imported by Charles Scribner's Sons. Octavo, 350 pages. Price $3.50.

Of the so-called South American series—and it is a pity that the editors and publishers could not agree to name it the Latin-American series, for it already includes Mexico and will probably add other Republics outside of South America—the sixth to appear is Uruguay. Following the general plan established in previous volumes, there are chapters on history, manners and customs, aborigines, the cities, the country, government, industries, commerce, and politics, with an elaborate appendix, in which are embodied several financial and commercial tables. The book is a trustworthy presentation of conditions existing in Uruguay to-day, and is on the whole sincerely flattering. The make-up is almost perfection, and the photographs inserted for illustration to the text are as fine as any that have appeared in similar works for a long time. Considering that the work is really one of reference, opinions are however rather too frequently given, and occasionally alleged facts are wrong. For instance (p. 243), the author affirms that the negroes in the north of Uruguay tend to predominate over the white. Even in South Brazil such is not the case, and it is far from the truth in Uruguay. Mr. Koebel's book is worth reading, and is therefore a credit to those of the series already published.

"Mexico. A History of Its Progress and Development in One Hundred Years." By Marie Robinson Wright. Philadelphia. Georgie Barrie & Sons. 1911. Illustrations. 511 pages. Size 8½ by 12 inches.

The author, who has identified herself by several works on the Republic of Mexico, has perhaps exceeded all previous efforts in the volume before us. With her facile pen she has taken up the history of Mexico from its inception, and carries us by her vivid descriptions through the vicissitudes of stirring political scenes having their culmination in the birth of the Republic. From this point Mrs. Robinson takes up a more detailed account of what has been accomplished under Porfirio Diaz and former Presidents.

Leaving politics, she finds an extensive field for the work of her pen in describing the social life of the Mexicans in all its distinctive phases.

In the latter half of the volume short sketches of the chief Mexican municipalities are given.

The book is profusely illustrated, and, inasmuch as Mrs. Robinson is an acknowledged authority on matters Mexican, the text can be relied upon as accurate.

We take this opportunity of congratulating the author on the excellence of the result of her work.

"**Chile, 1851–1910. Sixty Years of Monetary and Financial Questions and of Banking Problems.**" By Agustin Ross. Valparaiso. Imprint of Inglesa Westcott & Co. 238 pages, iv. Size, 6¾ by 9¼ inches.

This is an essay on the complex monetary and banking affairs of Chile. A pamphlet is added containing the new law of August 30, 1909, entitled the "Law of conversion and the message of the President of the Republic," objecting to some of the dispositions of that law.

From the data that the author places before us it would seem that the monetary matters and banking events that have taken place in the Republic of Chile during the last 60 years hold much that should interest the student of economy, in view of the fact that there is hardly another country which can show such a variety of experiences in handling of its finances. The author classifies the different periods as monetary anarchy (up to 1851), bimetalism (1851–1874), monometalism, silver (1874–1878), inconvertibility of bank notes (1878–1879), a period of forced currency of fiscal paper money (1879–1895), monometalism, gold (1895–1898), and now another forced currency of fiscal paper money.

In describing the financial conditions of Chile, the author has gone about his task with the hope of helping to bring this vital question out of the confusion which has hitherto engulfed it. A book of this character will undoubtedly carry weight and add much towards solving this most difficult of problems.

The Pan American Union has received the following pamphlets:

"**Packing for Export. Suggestions for Preparation of American Merchandise for Shipment to Foreign Countries.**" Department of Commerce and Labor, Bureau of Manufactures. 1911. 170 pages.

"**Cordage and Twine Trade in Foreign Countries.**" Department of Commerce and Labor, Bureau of Manufactures. 1911. 47 pages.

"**Commercial Directory of Honduras, 1911.**" Published by Ernesto Fletes in the interest of Honduran trade extension. Hamburg, Schroder & Jeve. 31 pages.

There has recently been received in the library the third and final volume of the series of publications on the resources and industries of Brazil, compiled by the Centro Industrial of the department of agriculture of Brazil. The present volume entitled "O Brasil, Suas Riquezas Naturaes, Suas Industrias," gives statistics of the railway, postal, telegraph, and telephone services of Brazil, reviewing the history of railway construction and development from 1822 to 1907. It also gives detailed statistics of the port movements and manufacturing industry brought down to 1907.

The first volume of the series treated of the extractive industry and the second of the agricultural industry. The Centro promises to publish shortly a résumé of the three volumes, which will undoubtedly be of great value to readers in general.

Treaty series, 1911. No. 12 (Arbitration Convention between the United Kingdom and Brazil, signed at Petropolis, June 18, 1909, Ratifications Exchanged at Rio de Janeiro May 6, 1911), as published by His Majesty's stationery office, has just been received by the Columbus Memorial Library for its permanent files.

Le Monde. Encyclopédie Mensuelle Illustrée. Anthologie des Revues de Tous les Pays. 47 Rue du Fossé-aux-Loups, Bruxelles, Belgique.

The initial number of this new monthly review was published on the 1st of June in Brussels, and judging from its attractive appearance and the character of the articles reproduced it should win instant success with the reading public interested in the world's movements as recorded in the standard magazines of foreign countries. The June number contains the following interesting articles: "Peace and disarmament," by Col. Richard. Gaedke, translated from McClure's; "The Fabian Society and its work," by Edward R. Pease, secretary of the Fabian Society, translated from T. P.'s Magazine, London; "The imperialiste problem," by His Grace the Duke of Marlborough, K. G., translated from the United Empire, journal of the Royal Colonial Institute; "Medicine and its variations," by Hermann Kerschensteiner, translated from the Süddeustsche Monasthefte, published in Munich; "Ancient Spanish painting, exposition of the Heinemann Gallery, Munich," by Gustave L. Mayer, translated from Der Cicerone, published in Leipzig; "England: Appearance and impressions," by Archibald Henderson, translated from T. P.'s Magazine; "Russian literature in 1910," par. by M. D. Agoff, from Revue Contemporaine, Russian bimonthly review published in French; "The awakening of China and its meaning," speech delivered before the American Academy of Political and Social Science of Philadelphia, by Wu Ting Fang, Chinese minister at Washington, translated from the Annals of the Society; "Electroculture, yesterday and to-day," by E. Paque, S. J., from La Tribune Horticole; "Tolstoi and the School of Yasnaïa-Poliana," by E. Cuny, professor of Russian at the School des Roches, from L'Education, and numerous other articles of equal interest.

Our best wishes for the success of this new undertaking.

LATIN AMERICA IN THE MAGAZINES.

"**Our Canal,**" by Albert Edwards in The Outlook for June 24, begins the first of a group of articles that deal with the many phases of the national project, under the subhead, "The Boss of the Job." Col. Goethals must pay the penalty of fame in the United States, which includes biographical vivisection, and as the American people demand first-hand information on the idiosyncrasies of character, combined with intimate details of the physiognomy of their heroes, the canal builder is sacrificed to make a Sunday supplement holiday. But Mr. Edwards is not a Sunday supplement writer. He carries out his commission to give the people who read his articles a feeling of close acquaintance with the "Colonel" without intimacy. His stories are "popular," but not familiar. In this first one he paints in contrasting colors the human side of the man and his work, for the canal is now a human problem and not an engineering one. Wallace was the architect, Stevens the contractor, and Goethals is the "boss" of the canal, and anyone who has worked will tell you that the "boss" is the one who gets the job done. Wallace solved the picture-puzzle problem of the plans, Stevens solved the transportation problem, and Goethals is solving the labor problem.

Mr. Edwards gives a hint of the many administrative duties that fill the days of the chief engineer of the Canal Commission, and not the least important of these is the unique "court" the Colonel holds on Sundays. Taking advantage of the human craving "to tell our troubles," Col. Goethals holds sessions wherein every employee on the zone can make a verbal complaint and receive, if not immediate satisfaction, at least a considerate hearing and an immediate answer that his particular "wrong" will be righted if his claim is just, or otherwise a strong intimation that the "incident is closed," to borrow a phrase from the chancelleries.

Col. Goethals is one of our best national products—a soldier. Paradoxical as this sounds in a country where fighting men are at a discount, yet it is true. The soldierly virtues are the springs of his success in his present work. Disciplined enthusiasm—that is the current that keeps the "live wires" humming on the canal, and the soldier has generated this current. Again he shows he can take orders as well as give them. The American Nation is his boss. He is only a "wheel" in the machinery, a big wheel, but still a wheel.

To summarize. There is the spirit, born of West Point, that he puts in his work, which makes the building of the Panama Canal seem a more-to-be-desired achievement than the attainment of ultimate salvation to Col. Goethals.

"**Our Predecessors on the Job,**" the second article of Mr. Albert Edwards's series on the canal, gives a thumb-nail history of the Isthmian Canal movement from the time of the knightly Balboa down to the days of dogged Bunau-Varilla. It may be said that when after infinite toil the first discoverer launched two boats on the Pacific, and sailed to the Pearl Islands to see their wealth and hear of the riches of Peru, the idea of the canal was born. A discussion of fantastic projects for the joining of oceans will be found in musty Spanish tomes. The discussion became so instant that King Philip II forbade it, at the instigation of the Inquisition, who considered the idea of altering God's plan of the universe as sacrilege. Reviewing the early schemes Mr. Edwards naturally gives much space to the efforts of the French in their attempt on the work. De Lesseps, he pictures in lenient lines, despite the fact that even his most ardent advocates can not absolve him from the sin of "high finance."

"How We Pulled the Teeth of the Tropics," the third of the four promised articles on the Panama Canal by Mr. Edwards appears in The Outlook for August.

In this paper the author discusses the great work that has been accomplished by Col. Gorgas and his untiring subordinates. Whatever may be the opinion of either engineers or laymen as to the feasibility of the canal project or any allied questions, there can be no gainsaying the fact that it would have been impossible of accomplishment had not the "yellow dragon" been laid. Yellow fever was a fire that consumed the personnel sent out under the French régime with the constancy of ever-burning Indian funeral pyres. The practical people of the United States would never have tolerated a Government-conducted scheme, no matter of what great importance, that involved the loss of life shown by the French statistics; rather throw up the whole work as chimerical than see the best of their engineers and mechanics sacrificed on the altar of this scourge-god of the Tropics.

It is typical of human nature that we forget our fear of disease when sickness has been wiped out, so now we do not find our public prints devoted to pages of extravagantly illustrated articles depicting the horrows of yellow fever and showing how the constant supervision of Col. Gorgas has laid this ghost.

When the clank of the last steel crane is silenced and the waters of the two oceans mingle, no one will deserve more honor for his share in the accomplishment of this continent-altering work than Col. Gorgas.

Mr. Edwards' articles are of great interest, containing just the material that a time-pressed reader needs in order to arrive at a good working knowledge of canal conditions.

"The Panama Canal" is the title of a comprehensive descriptive article appearing in The Engineer for June 9, in which the author, Percy F. Martin, F. R. G. S., compiles all the pertinent facts and the associated technical data into a clear and concise record of the work now being done in Panama. Some enlightening diagrams and illustrations are given. On the whole, the article is one of the best that it has been our pleasure to read.

Mr. Martin ends with a few paragraphs of frank admiration for the manner in which this great American work is being carried out.

We can show no higher appreciation of his kindly expressed admiration than by voicing the hope that every American will read this very valuable article.

"Panama Bonds and Consols" is the heading of a column in The Economist for July 8, which discusses the success of the recent Panama bond issue, and attributes this success to the ability of the Secretary of the Treasury, Mr. MacVeagh, who has in the method used given an opportunity for the small investor to become the holder of Government securities.

"An Engineer's Impressions of the Panama Canal," by James Dix Schuyler, in the Journal of the American Bankers' Association for July, gives the impressions of a visitor who has gone very thoroughly into the different phases of the present canal construction. Mr. Schuyler lays especial emphasis on the very valuable work that has been done by the medical department under the direction of Col. Gorgas, which he describes as a miracle of sanitation.

"The Great Waterway of the American Continent," by Fielding Provost, in The Pan American Magazine for June, gives short historical information anent the first efforts made to find an interoceanic waterway across Nicaragua.

"The Practical Side of the Panama Canal," by Frank L. Nelson, in The World To-Day for June, is a look into the future. The author takes up the question of shipping and docking facilities and the allied subject of installation of terminal services, which will be most important when the canal is completed. The author points out that the opening of the Isthmian waterway will mean a great market for the United

States in the Central and South American countries. He takes up in detail the opportunities they will present to the merchants of the United States on the west coast of South America, and urges prompt action by the United States in order to be in a position to take advantage of the new world of commerce to be opened.

"**The True Romance of Panama,**" by Fullerton L. Waldo, F. R. G. S., in The Bulletin of the Geographic Society of Philadelphia for July, is a brief account of the early explorations and the first surveys undertaken with the object of finding the path for the interoceanic waterway. Mr. Waldo begins with the dreams of the Conquistadores, and from his examination of ancient records, proves that the germ of the idea for a canal has existed almost from the date of the discovery of the Pacific by Balboa. His article gives us fascinating details of the fantastic projects first proposed by the men who spent most of their lives cruising in the West Indian waters. He also tells of the attempts made to find the waterway via the Atrato River, a route which has its advocates even to-day.

"**The Folly of Fortifying the Panama Canal,**" in The Independent for July 20, by the Hon. James A. Tawney, chairman of the Committee on Appropriations of the Sixty-first Congress. Mr. Tawney's views on the subject are very well known, as he has voiced them in the Halls of Congress. The question, however, now seems to be past the stage of discussion.

"**Our Neighbor Mexico,**" by John Birkinbine, past president of the Franklin Institute of Philadelphia and of the American Institute of Mining Engineers, is a paper appearing in The National Geographic Magazine for May, 1911. The author furnishes us with much general information relative to the conditions in Mexico and illustrates his text with some excellent photographs which give the stranger an idea of life in the Republic on our southern border.

This number of The National Geographic Magazine also contains a map of Mexico, which is both useful and timely.

"**Lower California,**" by E. W. Nelson, is another article in the same magazine, describing a 2,000 mile journey through the most extraordinary cacti forests of the world. Mr. Nelson, who is a member of the United States Department of Agriculture, made this trip and has gathered a wealth of valuable data on the physical characteristics of this unique peninsular. He considers the flora of the country visited the most extraordinary in the world. The picture of the Creeping Devil Cactus is in itself sufficient to prove the truth of his contention.

"**A Reading Journey Through Mexico,**" is the comprehensive title that includes a number of articles all dealing with allied subjects that appear in The Chautauquan for August. The material is given us somewhat after the manner of a guidebook style, but in justice to the different authors, we must say that this is not meant in any criticism of their English, for the story of Mexico, as told herein, all reads very smoothly. It is just the sort of book that any prospective visitor to Mexico should provide himself with before leaving New York.

"**The Mexican National Theater,**" is described by Adamo Boari, the architect, in the May number of "Architect and Building."

The BULLETIN has already published some pictures of this beautiful architectural project.

"**A Trip to Chichen Itza,**" in The Museum Journal of the University of Pennsylvania, contains the text of the first description of this historical city, which description was found in the notes of Diego de Landa, Bishop of Yucatan. The author gives us a rapid sketch of his journey through that country, so vividly described by the bishop. Some excellent photographs illustrate the article.

"**New Architecture in Old Mexico,**" by C. M. Price in Arts and Decoration for August, takes up the matter of Mexican architecture as affected by the wonderfully elaborate buildings of the Toltecs and the Aztecs and its development through the Spanish Mission period down to the present day. The house taken to illustrate the example of the latest system of monolithic construction is one designed by Mr. A. Boari, who will be best known as the architect of the national theater. In the pictures of the house shown he has achieved a wonderfully attractive and unique residence. The amount of originality displayed is striking, and the architect makes known the quality of his genius by his boldness in breaking away from conventional standards. The finished project entirely warrants this boldness of treatment, and it is safe to prophesy that Mr. Boari has sounded a new motiff in the art of monolithic construction.

"**Gods of the Aztecs**" is the title of an article in the Pan-American Magazine for August. Mr. Fielding Provost, the author, writes of the legendary history of the Mexican gods, and gives us curious information relative to their distinctive attributes.

"**Travel in Mexico,**" by C. S. Thomas, jr., in The Engineering and Mining Journal for June 17, details the difficulties of travel the exporter and prospector will find when he attempts to leave the main highways of Mexico.

"**Drug Trade in Mexico. Opportunities for Manufacturers and Something About the Larger Buyer,**" by C. T. Mason, appears in the American Exporter for August.

"**Denouncing Mineral Lands in Mexico,**" by J. P. Flynn, jr., and W. B. Baggaley in The Engineering and Mining Journal for July 22, is an article of considerable importance to any miner who is interested in opening up some of the new mining districts across the line. The author gives the method of procedure, which is simple, but must be followed exactly.

"**Lost Among the Floating Gardens of Mexico,**" is a story by Lem. A. Willard in The Mid-Pacific for July. We beg to call the author's attention to an oft repeated misspelling. The canal is called "viga," and not "vega," as he writes the word throughout his article.

"**Now is Opportune Time to Seek Mexican Trade,**" is a good commercial article by Lionel Samuel in Exporters' Review for June.

"**The Present Investment Situation in Mexico,**" is a description of present financial conditions in our sister Republic, which has been written by M. B. Katze for The Bankers Magazine for August. The author is extremely optimistic, as conditions warrant him to be, and he ventures the prophecy that the State of Mexico will be normal very shortly.

"**Mexico's Future,**" by Chester T. Crowell, in The Independent for July 20, is an article in which the author takes the opposite viewpoint, but it would seem that events have not justified him in his conclusions.

"**The Andean Garden of the Gods,**" by William V. Alford, F. R. G. S., in the September number of the Century Magazine describes a remarkable natural phenomenon found in almost the center of Peru. On the eastern slope of the Cordilleras there stretches out a great forest valley, or thus it seems when viewed from the higher lands. Upon descending to the valley, however, the entire appearance of the place is changed. What looked to be curious arboreal growths now become remarkable quartz, granite, and sandstone monuments, obelisks, and spires. Stones of many tons' weight are irregularly balanced on the apexes of slender shafts; great masses of rock rise on all sides in fantastic shapes, making a Brobdingnagian stone forest. As would be expected, there are many features that fascinate the mind of the geologist, for it might be said that nature had hidden away here, near the top of the highest Andes, a library of world history telling of its making.

"**A South American California,**" a short illustrated article by O. Sperber in the Bankers' Magazine for July, deals with the coast region of Peru.

El Sendero Teosofico, a periodical published by the students of the Theosophic school at Point Loma, Cal., shows great care in the matter of its text and illustrations.

The article entitled "Los Indios Blancos del Peru," advances the rather interesting theory that the white races inhabiting South America in pre-Incan times have disappeared through the process of degeneration.

"**Agriculture**" is the title of the leading article in Peru To-Day for June, and "**The Salt Industry of Peru**" the principal article appearing in the July number of the same publication.

This magazine continues to give reliable and enlightening monthly accounts of the advancement of the Peruvian Republic, a nation rapidly taking its place in the van of Latin-American countries.

"**A Hard-Luck Country,**" is the first article in the Inca Chronicle for June. This' periodical has passed the stage of experiment and takes its place as one of the best mediums of information on its special subject.

"**Venezuelan Coast Patrol Boat**" is indicative of the progress made by our Latin-American neighbors. We have the picture and description of the Venezuelan coast-guard ship *29 de Enero* in Shipping Illustrated of August 26. This is the first steamboat ever built in Venezuela, and it is a very creditable result that speaks well for an infant industry.

"**Venezuela,**" by W. H. Booth, appears in Cassier's Magazine for July. In this paper the author takes up a consideration of the trade possibilities of the country described. He devotes several paragraphs to the transportation question, always important in new territory, and lays stress upon the value of the Orinoco River in this matter. He speaks very highly of the opportunities offered for cattle raising in the Orinoco Valley.

The article is of added value because it gives first-hand descriptions of little-known territory, gained from an extensive journey throughout this section of Venezuela.

"**My Journey from Kalacoon to the Orinoco,**" by M. McTurk, C. M. G., is a short paper describing the voyage of the author to the Callao mine district in Venezuela, which appears in Timehri, the journal of the Royal Agricultural and Commercial Society of British Guiana.

"**Commercial Venezuela,**" in Commercial America for July, gives an analysis of the export and import trade of that country, showing how the United States leads in the most developed and potential resources.

"**Genesis of Bolivian Tin Deposits,**" in the August 12 issue of The Engineering and Mining Journal, is the first of a series of three articles by Miltiades Armas, describing this profitable industry.

The second article, "The tin deposits of Bolivia," appears in the number for August 19.

"**Tin Mining and Milling in Bolivia,**" in the August 26 issue of this periodical is the third of the series, in which the author gives many technical details of undoubted interest to those who realize the possibility of Bolivia as a tin-producing country.

Without doubt there is every chance for the profitable investment of capital in similar enterprises, and conditions would indicate that only a lack of systematic direction of development prevents Bolivia from being the greatest tin-producing country of the world.

"**Quito—Where Eternal Spring Reigns,**" a descriptive article by J. W. Davies, is printed in Travel for September. The author dwells on the charms and attractions of this remarkable city, nearly 2 miles above sea level and situated directly beneath the Equator, yet enjoying a remarkably equable climate. Mr Davies adds a distinctive touch by his description of the Quitonian mode of courtship.

"**Semiconvertible Cars for the Havana Central Railroad,**" a description, appears in the Brill Magazine for August.

The Brill Co. has shown great enterprise in obtaining contracts for much in the way of railroad rolling stock supplies throughout all Latin America, and this last example of their energy is in line with their previous successes.

"**Engineering Problems in Nicaragua,**" by T. Lane Carter, appears in the August number of The Engineering Magazine. Mr. Carter, who is an engineer of considerable practical experience in the country of which he writes, gives us a running account of the work of the gold prospector in Nicaragua. He also takes up other engineering problems that will confront those who go in the wake of future developments of this country.

"**The Galapagos Islands,**" is the title of one of the numerous articles appearing in the South American Supplement of the London Times of June 28.

In an editorial of the same paper a reference is made to an article recently appearing in the Bulletin of the Pan American Union describing this rarely visited but extremely interesting group of islands.

The Times Supplement contains its usual number of excellent political and descriptive articles dealing with Latin-American affairs.

The National Magazine for July, gives a couple of columns to an appreciation of the work that is being done by this institution. The editor of that very up-to-date magazine pays a warm compliment to the Director General of the Pan American Union and the staff that assists him.

"**The Great Work of the Pan American Union,**" by Flynn Wayne, is an article appearing in the August number of the same magazine, which gives the reader a mental picture of the beautiful new building that the Pan American Union now occupies, as well as the manifold character of work being carried on within its walls. The author concludes with a short résumé of conditions in the different Latin-American countries.

"**The Pan American Union and Its Mission,**" by Albert Hale of the Pan American Union Staff, is in the Municipal Development Magazine for June. The author, as indicated above, is one of the staff of the Pan American Union, and has compiled this data and given prominence to its work because of the exceedingly great number of inquiries that come to the office daily in reference to what the Pan American Union has accomplished and is accomplishing.

"**The Pan American Mail Line to Transequatorial Ports,**" an editorial appearing in Latin America for August 21, tells of the return of the Hon. James M. Porch, president of the Pan American Steamship Co., who has been the most active figure in this projected shipping scheme.

The Pan American Review, published in New Orleans, contains the usual articles of local and Latin American interest.

" **Our Merchant Marine and the South American Republics,**" is a discussion in the Scientific American for July 15 on the need of first-class ships as an aid to closer commercial relations, by John Barrett, the Director General of the Pan American Union.

In Chicago Commerce of June 30, there is a letter from the South American representative of this periodical describing the present commercial outlook in South America.

"**The Pan American Commercial Conference,**" the heading of an article in The Pan American Magazine for July, is a summary of the data compiled in a book recently issued by the Pan American Union, "The Proceedings of the Pan American Commercial Conference." In this article the great value of the publication is attested.

"**The Wooden Rose of the Volcan de Fuego,**" is another article in the same magazine written and illustrated by Lilian E. Elliott. This curious natural phenomenon is remarkable. The wooden flower consists of an excrescence from the branch of any tree, consequent to the invasion of a certain parasite which forces itself into the fibers of the wood and develops a curious spherical substance which bears a remarkable resemblance to a wide-open rose.

"**Mining in Guatemala,**" "**Trade in British Honduras,**" "**Modern Mining and Milling at Chiantla, Guatemala and Salvador,**" and "**Salvador and Her Mineral Wealth,**" are the titles of certain other papers appearing in the same magazine.

"**Eldorado,**" an unsigned paper appearing in The Scottish Geographical Magazine for July, is a compilation of such data as is available relative to the first expeditions that sailed with the object of discovering the fabled treasure land. Raleigh's fantastic description of the treasures to be found in a country situated somewhere in the Orinoco basin was the incentive of many attempts to reach a nation supposed to rival Peru in its wealth. This romantic chapter of American history has yet to be written in the fullness of its possibilities.

"**Our Friends the Bees,**" by A. I. Root and E. R. Root, in The National Geographic Magazine for July, while incidentally discussing the transportation problem of the proverbial busy workers, gives an illustration of hives packed for export to Argentina, a picture which is illustrative of the awakened interest of the American exporter in South American fields.

"**The Man Who Discovered the Pacific,**" by Henry Ward Bland, appears in the Overland Monthly for August. This paper is a synopsis of the story of Balboa and the adventures that befell him before he achieved the fruition of his labors. The author's figures as to the strength of the band that made the memorable march to the south sea do not agree with those furnished by Washington Irving. However, the investigator often meets with conflicts of authority on such points.

"**New American Doctrines,**" by Edward Perry, in the July number of Overland Monthly, is an article in which the author puts forth many speculations anent future conditions in South America and suggests conclusions not warranted by history. It is ever dangerous to grow a prophecy from a bed of statistics, however fertile. So many special causes enter into the reasons for the variation of annual import and export figures that a conclusion based on the ups and downs of such figures can be nothing more than a generalization, and would be just about as valuable to the student of social economy as generalizations usually are. Mr. Perry's imagination has led him far afield in the land of fancy. However, his motive in calling the attention of his fellow countrymen to that portion of the Western Hemisphere which the average citizen of the United States treats with studied neglect, is commendable. The article holds the attention despite doubtful premises and an extremely improbable conclusion.

"**High Lights of South America,**" by Forbes Lindsay in the September issue of Lippincott's, is a short paper in which the author takes up some of the numerous illusions that those who are ignorant of conditions in South America still cherish. The article is a short summary of the greatness of Latin-American land.

"**The Economic Climatology of the Coffee District of Sao Paulo, Brazil,**" by Robert DeC. Ward, of Harvard University, in the Bulletin of the American Geographical Society, June, points out the need of systematic climatological investigation in this part of Brazil.

Spreading Coffee to dry.
Picking Coffee.

COFFEE CULTURE.

"**Further Brazilian Plans,**" an editorial in The India Rubber World of August 1, discusses the legislation which has been passed in Para, Brazil, with a view of improving the rubber trade.

"**Wheat and Cotton Growing in Brazil,**" is the title of a letter from a special correspondent in The Economist of July 1, discussing the results achieved in wheat and cotton growing under Federal encouragement now taking place in Brazil.

"**Minerals Associated with Diamonds in Bahia,**" by J. C. Branner, appears in the Mining and Engineering World for July 29.

"The Geography of North-Eastern Bahia," by John C. Branner, is the first paper on the geography of a little known section of Brazil, appearing in The Geographical Journal for August. The author spent much time in and gave much study to this section of the world, and his maps have proved trustworthy and accurate.

"Improvement at Rio de Janeiro," in "Shipping" Illustrated of August 12, describes the recent work that is being done on the port works o this Brazilian harbor.

"The Aborigines of South America, A Study from a Missionary and Commercial Standpoint," by R. J. Hunt, appears in the July number of The Missionary Review of the World. In this article the author gives a study of the difficulties that confront the missionary in the interior of Paraguay.

"Forestry in the American Tropics," is the title of a short article appearing in American Forestry by the authority, John Gifford. The author writes of the quick returns that might be obtained by timber growers who cultivate the Cedrela trees in tropical countries.

"South American Markets and Our Merchant Marine," by G. J. Corey in Commerce and Industries of August, is another article on the subject of trade expansion in southern waters.

"A Journey Across South America," a translation of an article by F. Glaizot, on observations made while working in Bolivia and on a trip from La Paz to Para, Brazil, by way of the Andes and the Amazon, appears in the July 8 issue of The Engineering and Mining Journal.

"Our Commerce with Latin-America," an economic article by Edwin Maxey, appears in Moody's Magazine for August.

"An Argentine Love Drama," by David Hannay, in Blackwood's Edinburgh Magazine for June, gives the tragical story of Ladislao Gutierrez and Camila O'Gorman' who lived in the time of Rosas, a former President of Argentina.

"How to Increase Our Trade with Cuba," is an enlightening article in the August issue of Exporters' Review, by J. Nelson Polhamus, consul of Cuba, at New Orleans, La.

"Boating Through the Colombian Jungle," by H. D. Ashton in Travel for July, gives in detail the interesting experiences of a traveler from Barranquilla to Bogota.

"Dampier, Pirate, Explorer, and Author," an article by John R. Spears, appears in The Outing Magazine for August.

"The Losing of Terence McGuire," is the title of an article by Albert Eugene Wright, in the July number of The Sunset Magazine.

"Gold Dredging in Colombia," by Charles Janin, is in the Mining and Scientific Press of July 22.

"The Trade of Quezaltenango," is a short report in the January-February issue of the Guatemalan Review.

"Guatemala and the Trade Field which it Offers," by C. T. Mason, is the leading article in the Exporters and Importers Journal for June 10.

"The Mayari Iron Mines, Oriente Province, Island of Cuba, as Developed by the Spanish-American Iron Co.," a paper by James E. Little, appears in the August issue of the Bulletin of the American Institute of Mining Engineers.

"Nicaragua and Its Gold Industry," by T. Lane Carter, is one of the principal articles in the August 12 number of the Mining and Scientific Press.

Porto Rico Progress is an up-to-date periodical published in San Juan, with the object of proclaiming the island and its industries to the world.

SUBJECT MATTER OF CONSULAR REPORTS

REPORTS RECEIVED UP TO JUNE 1, 1911.

Title.	Date.	Author.
ARGENTINA.	1911.	
Labor strikes in Buenos Aires in 1910	Apr. 13	R. M. Bartleman, consul general, Buenos Aires.
Wood alcohol	Apr. 22	Do.
Fast steamship service between Europe and the River Plate	...do...	Do.
New Buenos Aires customhouse, photographs	Apr. 23	Do.
Argentine crops, 1910–11	Apr. 25	Do.
Bulletin of the "Defensa Agricola"	Apr. 29	Do.
Opening of the Argentine North Eastern Ry. Extension	May 2	Do.
"La Immigracion" of Buenos Aires, of Apr. 29, 1911, copies of	May 4	Do.
Trade notes: Fast trains between Buenos Aires and Rosario. Committee to pass on various automatic couplings for railroad. Scheme to construct railway connecting Rio and Buenos Aires. Argentine Government approved with Central Argentine Ry. for construction of irrigation works in Province of Cordoba. Heavy rains in Province of Buenos Aires. New port works at Buenos Aires. Discharging of heavy cargoes.	May 6	Do.
Exportation of wheat for the 4 months ended Apr. 30, 1911	May 11	Do.
Production, importation, and consumption of tobacco in Argentina.	May 12	Do.
Use of steam rollers in the construction and maintenance of roads in foreign countries.	...do...	H. P. Coffin, consul, Rosario.
Argentine meat trade	May 13	R. M. Bartleman, consul general, Buenos Aires.
Cotton growing in the Chaco; report on, by the inspector of lands and colonies to the minister of agriculture.	May 19	Do.
Trade notes: Automobiles imported into Argentina. Construction of extension works at Bahia Blanca. Figures relating to breweries in Argentina. Exploitation of forest land in Chaco. Bill authorizing project of connecting Parana River. Population of municipalities of Buenos Aires.	May 24	Do.
Argentine crops, 1910–11	May 27	Do.
Extension of port of Buenos Aires	May 29	Do.
Manufacture of gypsum in Argentina	June 2	Do.
Argentine ship construction	June 5	R. W. Bliss, chargé d'affaires American Legation, Buenos Aires.
Foreign commerce of Argentina for the quarter ended Mar. 31, 1911.	June 7	R. M. Bartleman, consul general, Buenos Aires.
Bulletin of the ministry of public works	June 7	Do.
Trade notes: Direct line of steamers between Norway and Buenos Aires. Population of Buenos Aires in April, 1911, was 1,326,993. Construction of new steel post office in Buenos Aires. Sale of plat of land for $647 per square meter. Siphon heads not to be placed on market. First woman admitted to practice law. Proposed shipbuilding yard near La Plata.	...do...	Do.
Comodoro Rivadavia petroleum	June 13	Do.
Annual report, 1910	June 14	Do.
Bulletin of the "Defensa Agricola"	...do...	Do.
New Argentine loan, signing of contract for	June 17	Do.
Bulletin of the ministry of public works	June 21	Do.
Sale of adding and calculating machines in Argentina	June 29	Do.
Duties on petroleum, lumber, etc	...do...	Do.
Annual production of beer in Argentina	July 5	Do.
Trade notes: Contracts for construction of dry dock at Puerto Belgrano capable of holding the large battleships now being constructed in the United States. Complete collection of Argentina stamps recently sold. Work on the subway in Buenos Aires. Population of Buenos Aires. Concession for a deep-water port on River Paroja. President of Argentina has approved plans of irrigation board for irrigation canals in islands of Choel-Choel. Government approved plans for construction of new sections of ports of Ibicuy. Project for enlarging the port of Buenos Aires.	July 7	Do.
Exports of the United States to the Argentine Republic for year ending June 30, 1910.	July 12	C. L. Chandler, consular assistant on duty at Department of State.
Increase in exports of United States to Argentina	Aug. 1	Do.

Reports received up to June 1, 1911—Continued.

Title.	Date.	Author.
BRAZIL.		
Production of cacao and manufacture of chocolate	Apr. 26	J. White, consul, Santos.
Cost of living in Bahia	May 17	S. P. Warner, consul, Bahia
Pernambuco notes: Automobiles, population. Amount of sugar delivered. German South American cable. Amount of cotton received in Pernambuco during 1908-9. New system of draining. Contract for port works. Construction of parks and avenues of the city.	July 17	P. M. Griffith, consul, Pernambuco.
CHILE.		
Better shipping facilities on this coast	Apr. 21	A. A. Winslow, consul, Valparaiso.
Opening for coal in Chile	...do	Do.
Trade and industrial notes: It is estimated Chilean Government should have 66 new locomotives and 955 freight cars during 1911. Chilean Government has renewed its offer to pay $15.44 United States gold for adult immigrants, $7.22 for children between 8 and 12, and $3.86 between 3 and 8. Government railways of Chile have 600 locomotives in operation. Customs receipts for first 3 months of 1911 amounted to $7,685,345 United States gold. Chilean Government has engaged expert for river banks, which are being washed away by swift currents. Francisco Doner, general manager of Chilean Government railways, has resigned. American mining interests have sent several engineers into Chile to investigate properties offered for sale.	Apr. 24	Do.
Developing Chile's natural resources	May 1	Do.
Chilean leather industry	...do	Do.
Chilean Government scholarships	...do	Do.
Wireless telegraphy in Chile	...do	Do.
Wood alcohol	May 5	R. Hanna, consul, Iquique.
American shoes in Chile	May 11	A. A. Winslow, consul, Valparaiso.
Trade and industrial notes: Expert to study iron deposits of Chile. Flour mills at Talcahuano. Chilean exports for four months of 1911. Land under irrigation. Customs receipts. Depositors in the Government savings banks of Chile. Government railways. Petroleum.	May 16	Do.
Chilean trade and its future	...do	Do.
Rolling stock for Government railways	May 20	Do.
Importation of rubber tires	May 24	Do.
Bids for boilers and machinery	May 27	Do.
Contract for electric lighting	May 30	Do.
Petroleum in Peru	...do	Do.
Trade and industrial notes: Chile's exports. Chilean Government railways with rolling stock valued at $148,097,130 United States gold. The Pulacayo tin mines. The Domeyko iodine works. Passengers and freight carried on Chilean Government railways. American capitalists negotiating for copper properties. Production of nitrate.	May 31	Do.
Railroad construction in Chile	June 8	Do.
Chilean tariff law	June 13	H. P. Fletcher, United States minister, Santiago.
Government contract for rolling stock	...do	A. A. Winslow, consul, Valparaiso.
Coal for Chilean railways	...do	Do.
Pavilion of Demography at Santiago	...do	Do.
Facts about Iquique, Chile, for the year 1910	June 14	R. Hanna, consul, Iquique.
Fiscal program of Chile	June 20	H. P. Fletcher, United States minister, Santiago.
Trade and industrial notes: Peruvian salt output for 1910. New customhouse at Santiago. Chilean exports. Government telegraph lines. Improved highways. Sale of land to settlers. Primary schools.	June 26	A. A. Winslow, consul, Valparaiso.
Exposition of water elevating machinery	July 21	Do.
Nitrate business in Chile	...do	Do.
Apple trade	July 24	Do.
Coal trade	...do	Do.
Contemplated changes in Chilean tariff	July 25	Do.
Shoe and leather industry of Chile	...do	Do.
Size and shape of catalogues	...do	Do.
Trade and industrial notes	...do	Do.
COLOMBIA.		
Comparative statement, showing declared values and quantities of exports from Barranquilla to Porto Rico for calendar years 1909 and 1910.	Apr. 23	A. L. Burnell, consul, Barranquilla.
Population of Colombia	Apr. 29	Chas. H. Small, vice and deputy consul general, Bogota.

Reports received up to June 1, 1911—Continued.

Title.	Date.	Author.
COLOMBIA—continued.		
Wood alcohol in Colombia	May 9	Chas. H. Small, vice and deputy consul general, Bogota.
Bad packing of shipment of bathtubs sent to Bogota. Suggestions as to improvement.	May 10	Do.
Permanent machinery exhibit in Bogota	May 22	Do.
Market for wire rope in consular district of Barranquilla	May 25	A. L. Burnell, consul, Barranquilla.
New silver coinage for Colombia	May 27	Chas. H. Small, vice and deputy consul general, Bogota.
Resolution referring to customs regulations	June 1	Arthur H. Frazier, American chargé d'affaires, Bogota.
Samples	...do....	Do.
Annual report on commerce and industries for the year 1910	June 14	Chas. H. Small, vice and deputy consul general, Bogota.
COSTA RICA.		
News and trade papers. Newspaper in Port Limon	July 19	Chester Donaldson, consul, Port Limon.
CUBA.		
Alcohol in Cuba	May 15	M. Baehr, consul, Cienfuegos.
Adding and calculating machines in Cuba	May 18	J. Rodgers, consul general, Havana.
Annual report	June 6	R. E. Holaday, consul, Santiago.
Electric power concession in Cuba	June 8	John B. Jackson, United States minister, Havana.
Amount of American capital invested in Cuba	June 15	J. Rodgers, consul general, Havana.
DOMINICAN REPUBLIC.		
Denatured alcohol made from sugar cane molasses in the Dominican Republic.	May 4	W. W. Russell, consul general, Santo Domingo.
Wood alcohol	...do....	Do.
Communal land law of the Dominican Republic	June 17	Do.
ECUADOR.		
Cacao beans	Apr. 21	H. R. Dietrich, consul general, Guayaquil.
Duties on telephone, telegraph, and electric apparatus	May 13	Do.
Squids or calamares	May 26	Do.
Tobacco industry	May 27	Do.
Ground wood pulp	May 29	Do.
Exports from Ecuador in 1910	June 20	Do.
Motor cycles	July 3	Do.
Annual report on commerce and industries of Ecuador for the calendar year 1910.	July 6	Do.
Piano trade	July 11	Geo. D. Hedian, consular agent, Esmeraldas.
Commission business in ivory nuts, rubber, etc	...do....	Do.
GUATEMALA.		
Coffee, sugar, and agricultural machinery	May 9	Geo. A. Bucklin, jr., consul general, Guatemala City.
Aviation and aeroplanes	May 11	Do.
Mail-order trade	...do....	Do.
Prepared roofing	May 12	Do.
Leather trade	May 17	Do.
Safety razors	...do....	Do.
Music publications	May 18	Do.
Fireworks	...do....	Do.
Electric and gas fixtures	May 22	Do.
Water and gas meters	May 23	Do.
Crude medicinal drugs	...do....	Do.
Electrical instruments	May 24	Do.
Sale of proprietary medicines	May 29	Do.
Import and export of minerals	...do ...	Do.
Motion pictures as advertisements of American manufacturing methods.	June 1	Do.
Packinghouse products	...do....	Do.
Metal doors	...do....	Do.
Lighting systems	...do....	Do.
Machinery for haciendas	...do....	Do.
Approval of mining concessions	June 2	R. S. Reynolds Hitt, United States minister, Guatemala City.
Concessions for refining of petroleum	June 3	Do

Reports received up to June 1, 1911—Continued.

Title.	Date.	Author.
GUATEMALA—continued.		
Cereals, duties	June 6	Geo. A. Bucklin, jr., consul general, Guatemala City.
Drawing materials and surveying instruments	...do	Do.
Wood dishes and clothespins	June 12	Do.
Corsets, children's waists, and hose supporters	June 13	Do.
Extension and increase of export duties in Guatemala	July 3	Do.
Extension of Guatemalan export duties	July 5	Do.
Wheelbarrows	July 11	Do.
Sewing machines, census, exchange, etc	Aug. 2	Do.
Scales and concrete mixers	Aug. 3	Do.
Sauces, spices, extracts, etc	Aug. 4	Do.
Export duty on coffee	Aug. 7	Do.
HONDURAS.		
Hammocks	Apr. 22	G. Schmuck, consul, Amapala.
Coffee, rice, corn, and wheat machinery	Apr. 26	L. Valentine, consular agent, San Juancito.
Hammocks	...do	Do.
Flour	...do	Do.
Improvements of business throughout Honduras	(Undated.)	F. R. McCreery, United States minister, Tegucigalpa.
List of articles not in customs tariff	May 6	A. T. Haeberle, consul, Tegucigalpa.
A new daily paper	...do	Do.
Annual report, 1910	May 9	Do.
Fire extinguishers	May 10	Do.
Vehicles	...do	Do.
Pianos	May 11	A. Gard, consul, Ceiba.
Automobiles	May 12	L. Valentine, consular agent, San Juancito
Automobiles	May 13	A. T. Haeberle, consul, Tegucigalpa.
Telegraph and telephone service	May 15	Do.
Automobiles	May 21	Do.
Sale of adding and calculating machines	May 26	C. I. Dawson, consul, Puerto Cortes.
Outcrops of coal in Honduras	...do	A. T. Haeberle, consul, Tegucigalpa.
Butter trade	June 1	Do.
No manufacturers of automobiles, motor boats, aeroplanes, etc., in consular district.	June 6	Do.
Automobiles	June 7	Do.
Suggestions regarding packing of goods	...do	Do.
Plows	June 12	Allen Gard, consul, Ceiba.
Locks, filing of catalogues in consulate	...do	Do.
Automatic musical instruments	June 10	A. T. Haeberle, consul, Tegucigalpa.
Shoeing of oxen	June 15	Do.
Sale of sawmill and woodworking machinery	June 16	C. I. Dawson, consul, Puerto Cortes.
Successful packing of American goods for Honduras	June 17	A. T. Haeberle, consul, Tegucigalpa.
Corrections of clerical errors	June 22	Do.
Discovery of oil in Honduras	June 27	Do.
Tariff changes in Honduras	...do	C. I. Dawson, consul, Puerto Cortes.
Circular instruction No. 34, sale of sawmills and woodworking machinery in foreign countries.	June 29	A. T. Haeberle, consul, Tegucigalpa.
Sale of adding and calculating machines in foreign countries	...do	Do.
Rate of exchange	July 1	C. I. Dawson, consul, Puerto Cortes.
A new publication	July 17	A. T. Haeberle, consul, Tegucigalpa.
Tiles	July 22	Do.
Regulations regarding driving of automobiles	...do	Do.
News and trade papers	July 27	Do.
Do	...do	C. I. Dawson, consul, Puerto Cortes.
Memorandum of the development attained by the Pan American Union.	Aug. 1	J. B. Wright, secretary of American legation, Tegucigalpa.
MEXICO.		
Hand agricultural tools	May 8	A. J. Lespinasse, consul, Frontera.
Automobiles	...do	Do.
Metal planers	...do	Do.
Hammocks	...do	Do.

Reports received up to June 1, 1911—Continued.

Title.	Date.	Author.
MEXICO—continued.		
Mexican Consular Bulletin	May 10	A. Shanklin, consul general, Mexico.
Proposed farming school	...do.....	E. M. Lawton, consular agent, Oaxaca.
Wood alcohol	May 11	L. N. Sullivan, consul, La Paz.
Construction, repair, and administration	May 13	Alexander V. Dye, consul, Nogales.
Coconuts	...do.....	C. A. Miller, consul, Tampico.
Sugar cane and sugar industry in San Luis Potosi	May 16	W. L. Bonney, consul, San Luis Potosi.
Adding and calculating machines in San Luis Potosi	May 17	Do.
Use of wire rope in San Luis Potosi	...do.....	Do.
Annual report of commerce and industries, 1910, Saltillo, Mexico	May 18	Do.
Adding and calculating machines	May 19	L. Hostetter, consul, Hermosillo.
Locks and keys	May 22	T. W. Voetter, consul, Saltillo.
Annual commercial report, Salina Cruz consular district	...do.....	L. W. Haskell, consul, Puerto, Mexico.
Salt springs and salt works at Salinas, San Luis Potosi, Mexico	...do.....	W. L. Bonney, consul, San Luis Potosi.
Woodworking machinery	May 23	J. H. Johnson, consul, Matamoros.
Names of newspapers and sale of news in Matamoros	...do.....	Do.
Sale of adding and calculating machines	...do.....	A. V. Dye, consul, Nogales.
Sale of sawmill and woodworking machinery in foreign countries	May 24	Do.
Sale of adding and calculating machines	May 24	W. E. Alger, consul, Mazatlan.
Automobiles	...do....	Geo. A. Wiswall, consular agent, Cananea.
Aeroplanes	May 29	J. H. Johnston, consul, Matamoros.
Wood alcohol	May 30	P. C. Hanna, consul general, Monterey.
Do	...do....	L. W. Haskell, consul, Salina Cruz.
Annual commercial report of the American consul at Nogales for the year 1910.	May 31	A. V. Dye, consul, Nogales.
Sonora, its future possibilities and opportunities for increasing trade.	June 1	L. Hostetter, consul, Hermosillo.
Vehicles and forgings for them	June 5	J. H. Johnston, consul, Matamoros.
Wood alcohol	June 8	C. A. Miller, consul, Tampico.
Sale of sawmill and woodworking machinery in San Luis Potosi	...do....	W. L. Bonney, consul, San Luis Potosi.
Salt imports, duty	June 9	Arnold Shanklin, consul general, Mexico.
Butter trade	...do....	Do.
Rubber tire exports	...do....	Do.
Automobiles	...do....	Do.
Imports of cinnamon of all classes and vanilla	...do....	Do.
Duty on adding and calculating machines	...do....	Do.
Duty on artificial leather	...do....	Do.
Wooden dishes and clothes pins	...do....	Do.
Resumption of railway traffic in Mexico	...do....	Do.
Wood alcohol	...do....	Do.
Concession for the establishment of oyster beds and the exploitation and sale of other sea foods along the coast of Sonora in Gulf of California.	June 10	A. V. Dye, consul, Nogales.
Sawmill and woodworking machinery	...do....	C. M. Freeman, consul, Durango.
News and trade papers, San Luis Potosi	June 12	W. L. Bonney, consul, San Luis Potosi.
News and trade papers	...do....	C. M. Freeman, consul, Durango.
Municipal laws in published form	...do....	Wm. W. Canada, consul, Veracruz.
Adding machines	...do....	J. H. Johnston, consul, Matamoros.
Sale of adding and calculating machines in consular district of Progreso.	...do....	G. B. McGoogan, consul, Progreso.
Sale of sawmill and woodworking machinery in the consular district of Progreso.	...do....	Do.
Automobiles	June 14	R. M. Stadden, consul, Manzanillo.
Construction, repair, and administration of roads	...do....	C. A. Miller, consul, Tampico.
Belting	June 15	L. T. Ellsworth, consul, Ciudad Porfirio Diaz.
Wood alcohol	June 16	M. Letcher, consul, Chihuahua.

Reports received up to June 1, 1911—Continued.

Title.	Date.	Author.
MEXICO—continued.		
United States postage stamps as an aid to trade	June 17	E. M. Lawton, consul, Oaxaca.
No turpentine producers	...do....	C. A. Miller, consul, Tampico.
Notes from Salina Cruz	June 18	L. W. Haskell, consul, Salina Cruz.
No turpentine producers	June 19	Samuel E. Magill, consul, Guadalajara.
Vehicles and forgings	...do....	L. W. Haskell, consul, Salina Cruz.
Electric Railway cars	...do....	Do.
Value of catalogues on file at consulate	...do....	R. M. Stadden, vice and deputy consul, Manzanillo.
Opportunities for teachers of English	...do....	Wm. W. Canada, consul, Veracruz.
Cement	June 20	P. C. Hanna, consul, Monterey.
Sale of sawmill and woodworking machinery in foreign countries.	June 21	L. W. Haskell, consul, Salina Cruz.
News and trade papers	...do....	Do.
Hydraulic cement tiles	...do....	C. A. Miller, consul, Tampico.
Sale of adding and calculating machines	June 22	Arnold Shanklin, consul general, Mexico.
Automobiles, motor boats, and clubs	June 25	R. M. Stadden, vice and deputy consul in charge, Manzanillo.
Sale of adding and calculating machines	June 26	L. W. Haskell, consul, Salina Cruz.
Clover	...do....	Arnold Shanklin, consul general, Mexico.
Sponge fishing	...do....	Do.
Moving-picture films	...do....	Do.
Slot machines	...do....	Do.
Where to get directory of clubs	...do....	Do.
Wheat, rice, peanuts, honey, chick-peas, sugar, cotton and ixtle.	...do....	L. T. Ellsworth, consul, Ciudad Porfirio Diaz.
Aeroplanes	June 29	Arnold Shanklin, consul general, Mexico.
Opportunity for the sale of envelope-addressing machines in Mexico.	...do....	Do.
How to enter Latin American markets	June 30	Do.
Agricultural products of Sinaloa	July 3	Charles B. Parker, vice and deputy consul in charge, Mazatlan.
Vessels clearing from port of Tampico for ports of United States.	July 4	C. A. Miller, consul, Tampico.
Summary of exports, quarter ending June 30, 1911	...do....	Do.
Guayule, garabanzas, and maguey plants for dry soils	July 5	W. L. Bonney, consul, San Luis Potosi.
Wheelbarrows	July 7	A. V. Dye, consul, Nogales.
Garbanzo crop	July 8	Do.
Sheet-metal building material	...do....	E. M. Lawton, consular agent, Oaxaca.
Formation of new company for quarrying onyx in Lower California.	July 9	Frederick Simpich, appointed American consul, Ensenada.
Commercial bodies, social clubs, libraries, etc	July 10	Richard M. Stadden, vice and deputy consul, Manzanillo.
Automobiles in Mexico	...do....	Wm. W. Canada, consul, Veracruz.
Declared exports to the United States	...do....	Arnold Shanklin, consul general, Mexico.
Acetylsalicylic acid and aspirin	July 11	Do.
Clothing industry	...do....	Do.
Duties on ties	July 13	Do.
Marine gas and oil engines	July 14	Marion Letcher, consul, Chihuahua.
Telephone companies in State of Veracruz and other information in connection with their service.	...do....	Wm. W. Canada, consul, Veracruz.
Sale of sawmills and woodworking machinery in foreign countries.	July 18	Do.
Shipments of mahogany and cedar logs	July 19	C. A. Miller, consul, Tampico.
Proposed new steamship line between New York and Mexico	...do....	Wm. W. Canada, consul, Veracruz.
Motor boats	...do....	G. B. McGoogan, consul, Progreso.
Marine motors	...do....	A. V. Dye, consul, Nogales.
Do	...do....	Thomas Voetter, consul, Saltillo.
Alcohol	July 22	L. T. Ellsworth, consul, Ciudad Porfirio Diaz.
Marine gas and oil engines	...do....	W. L. Bonney, consul, San Luis Potosi.

Reports received up to June 1, 1911—Continued.

Title.	Date.	Author.
MEXICO—continued.		
Sawmill and woodworking machinery	July 23	L. T. Ellsworth, consul, Ciudad Porfirio Diaz.
Tile, mosaic and marble	July 25	J. H. Johnston, consul, Matamoros.
Sale of mining property	July 26	W. L. Bonney, consul, San Luis Potosi.
Requirements for taking up mining claims	...do....	A. V. Dye, consul, Nogales.
Vanilla beans	Aug. 2	A. V. Dye, consul, Nogales.
Do	...do....	M. Letcher, consul, Chihuahua.
Do	Aug. 3	Thomas Voetter, consul, Saltillo.
Commercial organizations	...do....	W. L. Bonney, consul, San Luis Potosi.
Vanilla beans	Aug. 4	S. E. Magill, consul, Guadalajara.
Sale of tramway system of San Luis Potosi	Aug. 5	W. L. Bonney, consul, San Luis Potosi.
Vanilla beans	Aug. 6	Luis Hostetter, consul, Hermosillo.
Do	Aug. 9	J. H. Johnson, consul, Matamoros.
Do	Aug. 10	P. C. Hanna, consul general, Monterey.
NICARAGUA.		
Alcohol	Apr. 27	J. W. Johnson, consul, Corinto.
Wood alcohol	May 28	W. H. Seat, vice consul, Cape Gracias á Dios.
Sale of safety razors and protection for blades against rust	June 6	J. W. Johnson, consul, Corinto.
Trade and industries of Bluefields, for calendar year ended Dec. 31, 1910	July 7	Arthur J. Clare, consul, Bluefields.
PANAMA.		
Contract for sugar plantation and factory	May 6	Alban G. Snyder, consul general, Panama.
Annual trade report, 1910	May 11	P. Osterhout, consular agent, Bocas del Toro.
Hippodrome, etc., for Panama	May 16	Alban G. Snyder, consul general, Panama.
Pacific coast shipping of Panama	May 17	Do.
Sale of adding and calculating machines in foreign countries	May 19	Do.
News and trade papers	June 19	J. C. Kellogg, consul, Colon.
Floor tiling	Aug. 2	Do.
PARAGUAY.		
First shipment of coal to Paraguay	Apr. 28	Cornelius Ferris, consul, Asuncion.
Supplement to annual report, 1910	May 1	Do.
Wood alcohol	May 3	Do.
Forest products of Paraguay	May 15	Do.
Trade opportunity, wireless telegraph	May 31	Do.
Cattle raising and cattle lands	June 8	Do.
PERU.		
New floating dock at Callao	May 16	W. H. Robertson, consul general, Callao.
Floating dry-dock charges at Callao	May 18	Do.
Irrigation of the coast of Peru	June 30	Do.
Annual report of commerce and industries	July 15	Do.
Wireless telegraphy in Peru	July 17	Do.
The salt industry of Peru	July 19	Do.
The Peruvian rain tree	July 20	Do.
"Proprietary medicinal preparations (patent medicines) in Peru"	July 24	Do.
Arrival of new Peruvian steamship Pachitea	July 25	Do.
SALVADOR.		
Pamphlet entitled "La Organizacion Economica de el Salvador".	May 13	H. D. Clum, vice consul general, San Salvador.
Act of the National Legislative Assembly of Salvador taxing the profits of corporations.	...do....	Do.
Clipping from Diario Oficial	May 15	W. Heimke, jr., United States minister, San Salvador.
Decree reducing cement import duty	May 31	Do.
Date of reduction of cement import duty	...do....	Do.
Opening of port of El Triumfo	July 26	T. E. Dabney, consul general, San Salvador.

Reports received up to June 1, 1911—Continued.

Title.	Date.	Author.
URUGUAY.		
Provisions used by vessels duty free in Uruguay	Apr. 17	F. W. Goding, consul, Montevideo.
Annual report for 1910	Apr. 18	Do.
Agricultural area of Uruguay	May 2	Do.
Minerals found in Uruguay	...do....	Do.
Uruguay Eastern Ry	...do....	Do.
Population of Uruguay	May 5	Do.
Jerked-beef industry in Uruguay	May 6	Do.
Wood alcohol in Uruguay	May 8	Do.
Towage tariff in Montevideo	May 10	Do.
Agricultural implements exempted from customs duties	May 11	Do.
Modern meat-packing house for Uruguay	...do....	Do.
New labor-law proposal	May 12	Do.
Propaganda and information bureau to be established	...do....	Do.
Outlook for American coal	May 31	Do.
Construction of electric cranes	June 1	Do.
Tramway strike in Montevideo	...do....	Do.
Some Uruguayan imports during 1910	June 12	Do.
Live-stock statistics of Uruguay	June 16	Do.
Towage tariff in Montevideo	June 17	Do.
Cost of feeding farm help in Uruguay	June 19	Do.
American meat packers in Uruguay	...do....	Do.
Exports of Uruguayan live-stock products	June 20	Do.
Proposed wheel tax in Uruguay	June 22	Do.
Belting industry in Uruguay	June 28	Do.
Bridge project in the Santa Lucia River	July 1	E. V. Morgan, United States minister, Montevideo.
VENEZUELA.		
Annual report of commerce and industries of Venezuela for the calendar year 1910.	Apr. 30	I. A. Manning, consul, La Guaira.
Mail, telegraph, and telephone service	May 24	Do.
Use of wire rope	June 3	Do.
Annual report for the Maracaibo district	...do....	R. J. Totten, consul, Maracaibo.
Sale of adding and calculating machines	June 6	Do.
Terms of concessions granted	June 10	J. W. Garrett, United States minister, Caracas.
Sale of adding and calculating machines in Venezuela	June 13	I. A. Manning, consul, La Guaira.
Consolidated declared export return from Venezuela to the United States.	June 15	Do.
English company to take over cotton factory in Caracas	June 16	Do.
Sale of sawmill and woodworking machinery in foreign countries.	June 21	R. J. Totten, consul, Maracaibo.
Traveling salesmen for Maracaibo	June 22	Do.
Sale of sawmill and woodworking machinery	...do....	I. A. Manning, consul, La Guaira.
Price of construction materials in Caracas	June 26	Do.
Maracaibo notes: Efforts being made by local business men to form company for erection of cotton mill.—Celebration to commemorate one hundredth anniversary of Venezuelan independence.—Culture of rice.—Canned fruits from California.	June 28	Do.
Sale of empty bottles and corks in Maracaibo	July 11	R. J. Totten, consul, Maracaibo.
Copies of contract granted to Sr. R. Delgado Chalbaud	July 18	Herbert R. Wright, consul, Puerto Cabello.
Construction, repair, and administration of roads in foreign countries.	...do....	I. A. Manning, consul, La Guaira.
News and trade papers	...do....	Do.
Do	July 20	R. J. Totten, consul, Maracaibo.
Sale of musical instruments	...do....	Do.
Sale of cotton knit goods in the Maracaibo district	July 22	Do.
Approval of various contracts	...do....	I. A. Manning, consul, La Guaira.
Venezuelan tariff decision	July 25	Do.
Use of power boats on Lake Maracaibo	July 28	R. J. Totten, consul, Maracaibo.
City of Maracaibo	July 31	Do.

ARGENTINE REPUBLIC

MESSAGE OF PRESIDENT ROQUE SAENZ PEÑA.

At the opening of the Argentine Congress, on May 11, 1911, President Peña read his annual message, a summary of which is printed below. It has not been possible to publish this earlier, since the July and August numbers of the Bulletin were given over to the Annual Review.

After a few preliminary remarks, the President stated that although his inauguration was rather recent, he had already been enabled to make known his administrative policies, and to confirm the pledges made before and after his election. The Republic, he said, continued its onward march of progress under peaceful auspices, and the present internal situation gave assurance of permanent order.

With reference to foreign affairs, the Argentine Executive announced that relations with other countries have continued as friendly as ever; that diplomatic relations with Bolivia had been reestablished, and that the remarks of the President of Brazil at the opening of the Brazilian Congress were an eloquent proof of the fraternal concord existing between that country and Argentina.

The section of the message relating to finance has been fully covered in the Annual Review of the Argentine Republic, published in the July issue.

Concerning public instruction, the President pointed out the wisdom of the law passed in December last, placing the normal schools under the jurisdiction of the National Council of Education. According to the message there were inaugurated last October 468 primary schools, making a total of 2,067 institutions of this kind; but this number, the President remarked, was far below the demands of the people, and urged that the number of schools and colleges be further increased.

The agricultural industry has developed in spite of two successive dry seasons. After quoting figures to support this assertion, the President congratulated the country on being the leading exporter of corn and linseed, and second only to Russia in the exportation of wheat. The live-stock industry was equally progressive, the exportation of frozen beef in 1910 showing an advance of 45 per cent on the figures for 1906 and 13 per cent on those for 1909. The message next pointed out the value of irrigation in the development of the agricultural zone, and referred to the energies of the national department of irrigation, which "would model its action to the needs of our progress."

Under the heading of public works, mention was made of the adjudication of the contract for the extension of the port of Buenos Aires with a guaranteed depth of 33 feet of water, and of the two colossal dredges recently purchased, which were daily dredging 75,000 cubic meters. Contracts had also been closed for the construction of ports at Mar del Plata and Quequen. After commenting on the navigation of the Bermejo, and the dredging of the Parana, Uruguay, and Paraguay Rivers, of which 2,400 kilometers are buoyed, nearly one half with illuminated buoys, the sanitary works under construction in Tucuman, Santiago, and Corrientes, and those about to be commenced in Mar del Plata, were briefly outlined.

The President concluded the message with an expression of gratitude at the "unity of ideals" existing between the people and himself, and at the confidence and approval of the country in his administration.

NEW LOAN NEGOTIATED.

The loan of 70,000,000 pesos gold, which the President of the Argentine Republic was authorized to raise by law of June 3, 1911, for the construction of important public works, has been successfully negotiated at the rate of 98⅛ per cent, free of all charges and commissions. The net product of the negotiation was, therefore, 65,887,500 pesos gold. The following 12 banking institutions subscribed to the loan:

	Pesos gold.
Banque d l'Union Parisienne, Paris	21,000,000
L. Hirsch & Co., London	6,650,000
Thalman & Co., Paris	6,650,000
Banco Español del Rio de la Plata, Buenos Aires	6,125,000
Societè Generale de Belgique, Brussels	5,250,000
Banque de l'Union Anversoise, Antwerp	4,375,000
Bunge & Co., Antwerp	4,375,000
Crèdit Mobilere Francais, Paris	3,500,000
O. Memberg & Co., Paris	3,500,000
Louis Dreyfus & Co., Paris	3,500,000
Th. Bracht & Co., Antwerp	3,500,000
Crédit Anversois, Antwerp	1,575,000
Total	70,000,000

PAN AMERICAN BANK OF BUENOS AIRES.

A new institution of credit, under the name of Banco Panamericano, has begun operations in Buenos Aires. The principal object of the bank is the purchase, sale, and construction of houses on the installment plan, besides general banking business.

NATIONAL AGRICULTURAL BANK.

President Saenz Peña, of the Argentine Republic, has recently submitted to the federal legislature a bill providing for the establishment of a national agricultural bank. The purpose of this, as its name implies, will be the promotion of agriculture, and of rural towns by means of agricultural credit.

FOREIGN COMMERCE, FIRST QUARTER, 1911.

According to official statistics, during the first three months of 1911, the value of imports into the Argentine Republic aggregated 95,843,798 pesos gold, and that of exports of national products, to 105,246,342 pesos gold, showing a balance of trade in favor of the country of 9,402,444 pesos gold. A comparison of the above figures with those for the same period of 1910 shows an increase in the imports of the first quarter 1911, of 7,001,333 pesos gold, while the exports show a decrease of 10,019,779 pesos gold.

The imports of specie during the period in reference amounted to 8,463,000 pesos gold, a decrease of 1,651,700 pesos as compared with 1910. The exports of specie totaled 4,032 pesos gold, or 59 pesos less than in the first quarter of 1910.

The imports and exports of the first quarter for the last five years were as follows:

First quarter of—	Imports.	Exports.	Balance of trade.
	Pesos gold.	*Pesos gold.*	*Pesos gold.*
1907	54,660,885	96,946,217	42,285,332
1908	70,840,220	115,627,832	44,787,612
1909	73,028,538	140,231,340	77,202,802
1910	88,842,465	115,266,121	26,423,656
1911	95,843,798	105,246,342	9,402,444

THE PORT OF BUENOS AIRES IN 1910.

The report of the comptroller of the port of Buenos Aires, dated July 4, 1911, contains the following figures concerning the general movement of ships during 1910.

	Foreign.		Coastwise.		Total shipping.	
	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.
Steamers—						
Entries	2,133	5,547,405.69	5,265	2,277,094.13	7,388	7,824,499.82
Clearances	2,117	5,562,351.64	5,229	2,165,857.76	7,346	7,728,209.40
Sailing vessels—						
Entries	137	163,574.00	9,769	1,136,891.26	9,906	1,300,465.26
Clearances	131	156,924.91	9,611	1,133,906.38	9,742	1,290,831.29

GREAT DRY DOCK IN PUERTO BELGRANO.

Work has been started on the construction of the great dry dock at the military port of Belgrano, Argentine Republic. The dock will have capacity for 32,000-ton battleships. Its length of 250 meters will be 56 longer than that of the Argentine *Dreadnoughts* now being constructed in the United States. The cost of the work is estimated at 6,800,000 pesos gold.

IRRIGATION WORKS.

An executive decree passed on June 30, 1911, approves the plans and specifications for the irrigation canal to be built on the island of Choele Choel; the sum authorized for the work is 577,162.53 pesos.

In La Cienaga, Jujuy Province, there will be built a dam, the cornerstone of which was laid early in July, for the irrigation of a vast area of land in the Provinces of Salta and Jujuy.

IRRIGATION IN RIO TERCERO.

Next in size and importance to the irrigation works now being carried out in the Neuquen and Negro Rivers, Argentine Republic, are those which will soon be undertaken in the department of Rio Tercero, Province of Cordoba, utilizing the waters of this river. The system will irrigate a vast area of 55,000 hectares of fertile land, and will consist of a stone dam, 43 meters high and 18 meters long, with a capacity for 291,793,500 cubic meters of water, a distributing canal, and motive-power plant. In connection with these works a steel bridge will be constructed over the Cosquin River on the highway from Cordoba to Cruz del Eje.

RAILROAD NOTES.

According to data published by the Bureau of Railroads of the Argentine Government, the condition of the works on the national lines on June 15, 1911, was as follows: Line from Embarcacion to Formosa, rails laid as far as kilometer 147; Barraqueras-Metad line, as far as kilometer 158; Eastern Railway, Diamante-Crespo section, kilometer 25; San Antonio-Nahuel Huapi line, kilometer 262; Comodoro Rivadavia-Lago Buenos Aires line, kilometer 273; Puerto Deseado-Lago Buenos Aires, kilometer 150. These works are being carried out by 6,589 laborers.

The following lines have been opened to public traffic: Section from Miguel Riglos to Cereales, on the branch from Maza to Oeste of the Buenos Aires Pacific Railway; section comprised between Bouquet and kilometer 77, on the branch from Las Roasas to Villa Maria of the Argentine Central; section between Recalde and Ombu, on the Alvear-Pigue branch of the Southern Railway; section between Idiazabal and Dalamacio Velez, on the Cruz-Cordoba line of the Argentine Central.

The Southern Railway has been authorized to construct a branch of 60 kilometers, starting at the Baravo station of its line from Tandil to Bahia Blanca and terminating at the railroad from Olavarria to Laprida; and another branch from the Quequen station, on the main line, to the seaport now being built on the mouth of the creek of the same name.

WOOL SEASON OF 1910–11.

The Argentine wool season for 1910–11 was closed on May 20, 1911, after a most encouraging and profitable season. Despite a somewhat pessimistic prospect early in the season, the statistics just furnished by the Central Produce Exchange indicate a greater quantity of shipments over the previous season.

	1910–11	1909–10
	Kilos.	*Kilos.*
Total receipts	88,286,034	79,275,113
Shipments	87,657,193	78,386,344
Stock on hand	628,841	888,769

STEAMSHIP LINE BETWEEN RUSSIA AND BUENOS AIRES.

The Argentine minister at St. Petersburg, Russia, has succeeded in his efforts to induce one of the strongest Russian navigation companies to establish a line between the Russian capital and Buenos Aires, by reason of which it is expected that the commercial intercourse between these two countries will be considerably increased.

MONUMENT TO O'HIGGINS IN BUENOS AIRES.

Award of the prizes for the competitive designs for a monument to Gen. Bernardo de O'Higgins, the Chilean patriot, has been announced. The first and second prizes were won by Sr. Guillermo Cordova and the third by Sr. Virginio Arias. The monument will be erected in Buenos Aires in accordance with a law passed in May, 1910.

MONUMENT TO WASHINGTON IN BUENOS AIRES.

The Argentine Congress has accepted the donation made by the American colony of a monument to George Washington. The law of acceptance empowers the President of the Republic to designate a place in the Parque Tres de Febrero for the location of the monument.

MONUMENT PRESENTED BY SYRIAN COLONY.

The Syrian colony is to erect a monument in Buenos Aires as a tribute to the one hundredth anniversary of Argentina's independence. The corner stone exercises were fittingly celebrated on June 16, 1911.

INAUGURATION OF MONUMENTS IN BUENOS AIRES.

The beautiful monument erected in Buenos Aires to the memory of Juan Martin de Pueyrredon, the great Argentine soldier and statesman, was unveiled with appropriate ceremonies presided over by the Chief Executive, on May 28, 1911.

Another monument was also unveiled at Buenos Aires, the one dedicated to the memory of the founders of the School of Medicine, Drs. Gorman, Argerich, and Fabre.

SOUTH AMERICAN CONGRESS OF AGRICULTURAL SCIENCES.

By resolution of the International Scientific Congress, a South American Congress of Agricultural Sciences will be held in Buenos Aires in July, 1913. The propaganda and organization of the congress is intrusted to the Sociedad Rural Argentina (Argentine Rural Society), the National Society of Agricultural Engineers, and the National Schools of Agriculture of Buenos Aires and La Plata.

WIRELESS SYSTEM.

With the completion of the 3 remaining wireless stations in the proposed system of 12, the Argentine Republic will have one of the most complete wireless communication services in the world. The stations already in operation are: Ushuaia, Ano Nuevo, Cabo Virgenes, Puerto Militar, Cabo Corrientes, Formosa, Mendoza, Punta Delgada (near Madryn), and Rio Grande. The 3 which will soon be opened are: Madryn, Comodoro Rivadavia, and Santa Cruz. The combined radius of these stations will comprehend the entire territory of the Republic and include a great number of Chilean ports on the Pacific.

There is now pending in the Argentine Senate a bill, similar to the United States law on the subject, compelling all ships with a crew of over 50 members and touching at Argentine ports to be equipped with wireless telegraphs.

BOLIVIA

MUNICIPAL BUDGET OF LA PAZ FOR 1911-12.

The Municipal Council of La Paz, capital of Bolivia, has recently approved the budget of revenues and expenditures for the fiscal year 1911–12. The revenues are estimated at 1,211,895.48 bolivianos, and the same amount is appropriated for expenditures.

MUNICIPAL CENSUS OF LA PAZ, 1909.

The results of the municipal census of La Paz, the capital of Bolivia, completed on June 15, 1909, have just been published in pamphlet form, and show that in the last seven years the city has enjoyed its largest increase in population. The growth of the population of La Paz is indicated in the accompanying table:

Census year—	Population.	Years elapsed.	Increase.	Census year—	Population.	Years elapsed.	Increase.
1586	6,080			1845	42,842	14	12,379
1675	12,600			1886	56,849	41	14,007
1796	21,120	121	8,520	1902	60,031	16	3,182
1831	30,463	35	9,343	1909	78,856	7	18,825

On June 15, 1909, the total number of foreigners residing in the Bolivian capital was 3,357, distributed as follows among the various nationalities: South Americans, 2,184; Europeans, 988; North Americans, 124; Africans, 27; Central Americans, 18; Asiatics, 16.

BANK EARNINGS, FIRST HALF OF 1911.

According to the balances of June 30, 1911, the earnings of the banks of the Republic of Bolivia during the first six months of 1911, were as follows: Banco Nacional de Bolivia, 491,362.78 bolivianos; Banco Argandoña, 212,721.36 bolivianos; Banco Industrial, 155,897.78 bolivianos; Banco Mercantil, 121,834.38 bolivianos; Banco Crédito Hipotecario, 58,162.59 bolivianos; Banco Hipotecario Nacional, 50,119.13 bolivianos.

EXPORTS FROM NEW YORK TO BOLIVIA, JUNE AND JULY, 1911.

Through the courtesy of the Bolivian minister at Washington, Sr. Don Ignacio Calderon, the BULLETIN is in receipt of the statement of the consul general of Bolivia at New York, covering the exports from New York to Bolivia for the months of June and July, 1911.

Articles.	Value.	Articles.	Value.
JUNE.		JULY.	
Cotton	$39,082.96	Machinery	$20,665.58
Machinery	6,308.34	Cotton	19,699.66
Foodstuffs	5,667.80	Foodstuffs	12,451.50
Hardware	3,293.17	Flour	4,846.27
Flour	3,124.80	Hardware	3,324.70
Liquors	2,098.50	Kerosene	1,447.06
Miscellaneous	34,153.74	Miscellaneous	61,017.29
Total	93,729.31	Total	123,451.92

AGRICULTURAL SCHOOL IN COCHABAMBA.

The agricultural school in Cochabamba, Bolivia, organized at the initiative of the President of the Republic and Sr. Germán Zegarra, former minister of agriculture, was formally inaugurated on June 1, 1911, with imposing ceremonies.

PRODUCTION OF TIN IN 1910.

According to official estimates, the production of tin in Bolivia for the year 1910 amounted to 830,000 kilograms, valued at 30,000,000 bolivianos. Due to the exceptional advance of prices, which in 1910 reached as high as £230 per ton, it is confidently predicted that the production of tin in 1911 will be the largest recorded in the history of this industry, the most important of the Republic.

EXPORTS OF RUBBER IN 1910.

A report recently submitted by the director general of customs of Boliva to the minister of finance, on the cultivation of rubber in the Republic, states that, although the production of the article was not as large as that of tin, it netted the Bolivian treasury a greater revenue than that yielded by the latter product.

The immense area of the country under cultivation of rubber comprises, according to the paper the whole of the national territory of Colonias and of the Department of Beni, and parts of the Departments of Santa Cruz and La Paz.

During the year 1910 the total exports of rubber from Bolivia amounted to 3,117,650 kilograms, valued at 27,653,555.50 bolivianos, and paying export duties to the sum of 1,920,468.48. Nearly one-half of the amount exported was shipped to England, 1,297,637 kilograms with a value of 11,510,040.19 bolivianos. Brazil received the next largest shipment, 824,973 kilograms worth 7,317,510.51 bolivianos. Other shipments were as follows: Germany, 575,545 kilograms, valued at 5,105,084.15 bolivianos; France, 214,314 kilograms, valued at 1,900,965 bolivianos; Belgium, 162,354 kilograms, valued at 1,440,079.98 bolivianos; Uruguay, 20,159 kilograms, valued at 182,003.53 bolivianos; unknown destination, 12,343 kilograms, valued at 109,482.41 bolivianos; United States, 9,965 kilograms, valued at 88,389.55 bolivianos.

The actual production of rubber in 1910 having been greater than was expected, the revenues derived from the export duty thereon exceeded the estimated amount by 716,468.48 bolivianos.

THE MINING INDUSTRY.

Under the supervision of the director general of statistics of Bolivia, Sr. Pedro Aniceto Blanco has published a comprehensive monograph on the mineral wealth and industry of the Republic, from which book the following extracts have been taken:

> Indications of gold are found all along the eastern slope of the Cordillera Real, and also in the beds of the rivers which flow east from this range. The annual production of gold in Bolivia may be reckoned at 17,460 ounces, which, valuing the ounce at $20 United States currency gives a value of $349,200.
>
> The richest silver region in the Republic lies in the west. In the north, south, and east the silver lodes are found near the summits of the Andean chain, running in an east to west direction. There is comparatively little silver in the north. The total production of silver during 1909 was valued at 8,060,461 bolivianos as compared with 11,769,040 bolivianos in 1902 and 18,431,198 bolivianos in 1895. This diminished output is attributed to the fall in the price of the metal, and the increase in the value of tin, which has been found in abundance close to the silver bearing areas and in a more easily worked condition. The owners of silver mines have consequently their work and capital to tin production.
>
> Copper is found widely dispersed over the highlands of Bolivia, and these formations extend into Peru. The richest copper region is in the Province of Pacajes, which lies on the Altoplanicie, southwest of Lake Titicaca, and contains the copper deposits of Corocoro. These mines are well known on account of their bearing free or native copper disseminated through the veins in a sandstone gangue, the only well-known

instance of this being found in the Michigan copper mines near Lake Superior. Crushing and washing are the only processes required to produce an 80 per cent concentrate of fine copper. It is the purity of the metal from the Corocoro mines and their geological interest, rather than the amount of copper the district produces, which have drawn attention to Bolivian copper production.

The production of copper in Bolivia since 1885 has varied as follows:

	Kilos.
1885	1,518,000
1900	2,494,160
1905	4,552,311
1909	3,084,089

Tin is found principally on the higher peaks of the Cordillera Real overlooking the Amazon Basin. The tin presents itself in oxides at an average of 15,000 feet, increasing in purity with height to a cassiterite showing 60 per cent pure metal. Below this, in the mountain section, the tin is associated with many impurities and abundant pyrites. The average ore runs at from 5 to 10 per cent. High grade stream tin is also found and washed.

In the majority of Bolivian tin-mining operations the only methods employed are crushing and washing in order to produce a concentrate of 55 to 65 per cent tin, in which form the bulk of the metal is exported.

Bolivia is now the second tin-producing country in the world, ranking after the Straits Settlements. The production has steadily increased, as is shown by the following figures of the production of concentrate:

	Quintals.[1]
1900	162,342
1905	269,120
1906	395,261
1907	313,237
1908	325,416
1909	355,664
1910 (first 6 months)	190,100

The principal beds of wolfram in Bolivia are found in the Province of Caluyo, Department of La Paz, where it exists as a tungstate of manganese iron. The tungsten ores, which are found in Bolivia in fair abundance, do not as a rule contain more than 56 per cent of tungstic acid. Frequent fluctuations in the European market have subjected the owners of wolfram mines to so many losses in the past, that most of the mines are shut down and only ownership of title is maintained. The late improvement in this market, if continued, together with the better facilities of railway transport which are promised in the near future, may induce proprietors to reopen them again.

Coal measures in Bolivia have been proved upon the peninsula of Copacabana in Lake Titicaca, the outcrop running in a northwesterly to southeasterly direction. The coal seams are found embedded in a broad strata of sandstone somewhat resembling the millstone grit. The coal seams themselves are small, and although of fair calorific values are associated with many impurities. The soft nature of the strata in which they are found increases the cost of working, since timbering on the Bolivian Plateau is almost prohibitive in expense, and all adits have to be lined with stone. Claims have been staked out on this outcrop for some 4 miles in length, but none are now being worked. Some 30 years ago over 700 tons were produced at Yamputa port, on Lake Titicaca.

The existence of petroleum in eastern Bolivia, on the foothills of the Cordillera Real, has been proved by the presence of pools of relatively pure oil and also of pitch.

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[1] Quintal=101.4 pounds.

These indications extend in the Department of Santa Cruz to the village of Monte Agudo, a distance of some 300 miles. The oil-bearing belt throughout this length appears, however, to be comparatively narrow. Similar indications are reported in the Beni district, but they are less well known.

The existence of petroleum fields in Bolivia is recognized in connection with more than one projected railway. In the contract of the concession for a railway from the Argentine border (Pilcomayo River) to Santa Cruz petroleum working is the subject of one of the principal clauses.

PROPOSED RAILROADS.

Application has been made to the Bolivian Government for authorization to construct and operate a railway line from the Cachacamarca station to the Uncia Mining Camp, passing through the Huanuni Canton. In connection with this line the petitioner proposes to build a branch road starting from a convenient point on the former line and terminating at Oruro.

Another application from the same petitioner proposes to construct an electric or steam railway from Cochabamba to a port that may be established on an adequate point on the Chimore River.

RAILROAD NOTES.

On June 8, 1911, work on the Uyuni-Tupiza Railway was formally inaugurated. It is proposed to also build a branch that shall connect this line with the railroad from Quiaca to Buenos Aires.

The work of construction on the Potosi Railway is being pushed with great activity, and on June 10, 1911, rails had been laid as far as kilometer 79. This line will traverse the highest region of Bolivia.

The Cochabamba line has been completed as far as the Zupan Tunnel, 10 kilometers from the town of Baderani. This tunnel, 100 meters long, is now being opened and will be finished by September, when the work of laying the rails of the line will be resumed. It is thus expected that this important railroad will be in operation before the end of the year.

The Bolivian Government is exerting its best efforts that all the railways under construction may be completed without delay and as quickly as possible. In pursuance of this policy the minister of the interior, Dr. Saracho, made a tour of inspection throughout the Republic for the purpose of acquainting himself with the condition and progress of the various works.

Sr. Gabriel C. Valverde has applied to the Bolivian Government for permission to build a branch line from a convenient point on the Arica-Viacha Railway to Oruro. Sr. Valverde offers to carry out the work at his own expense and without guaranty from the Government.

BRAZIL

TREATY OF ARBITRATION WITH GREAT BRITAIN.

The treaty of arbitration signed at Petropolis on June 18, 1909, between Brazil and Great Britain was formally promulgated by the Brazilian Government on May 10, 1911.

ESTABLISHMENT OF LEGATION IN TURKEY.

A presidential decree of April 30, 1911, establishes a legation in Turkey, which will be in charge of a resident minister.

POSTPONEMENT OF THE CENSUS OF THE POPULATION.

The President of the Republic of Brazil, finding that the appropriation contained in the budget for the taking of a census of the population, which was fixed for June 30, 1911, would be insufficient to meet the expenses of this service and that it would be necessary to ask Congress for an additional credit, issued a decree on May 11, 1911, deferring the taking of the census, and ordered that all work connected with the census cease from that date.

DONATION TO PUBLIC LIBRARY.

Dr. José Carlos Rodrigues, editor and proprietor of the Jornal do Commercio of Rio de Janeiro, recently presented the National Library of Brazil with his large private collection of Brazilian books, to be known as the "Benedicto Ottoni" collection. Dr. Rodrigues is an authority on Brazilian history and bibliography and his collection contains a large number of extremely rare volumes and many priceless documents.

REVENUE AGENCY AT ITACOATIARA, STATE OF AMAZONAS.

A presidential decree of May 31, 1911, establishes a revenue agency of the first class at Itacoatiara, in the State of Amazonas.

INTERNATIONAL EXPOSITION AT SAO PAULO IN 1922.

A movement has been started at Sao Paulo for the purpose of holding an international exposition in that city in 1922, to commemorate the centenary of the independence of Brazil. It was on the banks of the Ypiranga, a small stream near the city of Sao Paulo, that Dom Pedro I, on September 7, 1822, first proclaimed the independence.

THE BRAZILIAN EXCURSION CO.

There has recently been organized at Sao Paulo a company under the name "The Brazilian Excursion Co.," which proposes to organize excursion parties to visit the principal points of interest in the State of Sao Paulo and other States of Brazil, obtaining for this purpose especial transportation and hotel rates. The company will establish agencies in Rio de Janeiro, Sao Paulo, and Santos, and proposes to organize short trips for the benefit of the passengers of steamers calling at the ports of Rio de Janeiro, and Santos. It is also prepared to collaborate with tourist agencies in foreign countries. The main object of the company is to make the resources of the country better known and to attract foreigners in larger numbers.

APPROVAL OF PLANS FOR IMPROVEMENTS AT PORT OF MANAOS.

The President of the Republic has approved the plans and estimates presented by the Manaos Harbour Co. for the projected improvements at that port. The works will consist of a new pier or pontoon 150 meters long for the unloading of river craft; a stationary bridge connecting with warehouse No. 8 and provided with electric elevators; and the extension of the present pontoon in the roadway. The cost of the projected works is estimated at 882,216 milreis.

MODIFICATION OF PLANS FOR PORT OF PARA WORKS.

The Government has approved with certain modifications the new plans for the first and second sections of the port works at Para. The first section of the wharf, extending from Ver o Peso Dock to the southern part of the bay and having a length of 1,520 meters, including the channel of approach, must be completed by December 31, 1912. The second section, comprising a length of 365 meters, must be completed by December 31, 1915. The company must submit the plans and estimates for the improvement of the Ver o Peso Dock within six months, dredging it to a minimum depth of 1 meter, and increasing the height of the surrounding walls.

AMAZON WIRELESS TELEGRAPH AND TELEPHONE CO.

The "Amazon Wireless Telegraph and Telephone Co.," a United States corporation with headquarters at Augusta, Maine, has recently obtained authorization to operate in Brazil.

SHIP REPAIR DOCKS AT PORT OF BELEM, PARA.

The Government has approved the plans and estimates submitted by the Port of Para Co. for the construction at the port of Para of three slips, of the "Morton" type, for the repair of vessels employed in the service of this port.

NEW INDUSTRIAL COMPANIES.

The following companies have recently been organized and registered for commercial operations in Brazil:

The Gem Exploration Co., with headquarters at 88 East Kinney Street, Newark, New Jersey; authorized capital, $25,000; objects of the company, the lease or purchase and operation of gold and diamond mines and other precious stones.

The Brazilian Iron and Steel Co., with headquarters at Wilmington, Delaware, has recently been authorized to operate in Brazil. The company will acquire, lease, and develop lands containing coal, iron, manganese, petroleum, and other minerals, engage in the manufacture of iron, build public works, etc. The capital of the company is $1,000,000.

The Correio Paulistano states that the Equitable Land & Lumber Co., a company incorporated in the State of Kentucky, is negotiating with the owners of forest lands in the State of Sao Paulo for the purchase or lease of extensive wooded areas in this State, for the purpose of engaging in the lumber business on a large scale.

The Banque Brésilienne Italo-Belge, of Antwerp, has been authorized to establish a branch at Sao Paulo. A Parisian banking association recently organized has been authorized to establish branches at Mococa and S. Jose do Rio Pardo, in the State of Sao Paulo, and at Curitiba, State of Parana. The "Sudamerikanische Bank, Actiengesellschaft," of Berlin, will establish a branch at Rio de Janeiro.

The Northern Camps Co. (Ltd.) has by a decree of July 5, 1911, been registered in Brazil, to engage extensively in the cattle industry. The company was organized in England to take over the property and interests of The Patagonian Sheep Farming Co. (Ltd.), operating in the Provinces or Territories of Santa Fe, Cordova, and Pampa Central, Argentine Republic.

The Anglo-Brazilian Motor Transport Co. (Ltd.), an English corporation capitalized at £25,000, which has for its objects the purchase, sale, or hire of motor vehicles of all kinds, the establishment of transportation lines, the construction of garages, etc.

An English company, known as The Lafayette Rubber Estates (Ltd.).

REVISION OF CONTRACT FOR LEASE OF CEARA RAILWAY SYSTEM.

A presidential decree of May 10, 1911, revises the Government's contract with the South American Railway Construction Co. (Ltd.) for the lease of the Ceara system of railways. Under the new contract the Government obtains a considerable extension of lines at a relatively small increase in expense. In addition to the extensions and branches stipulated in the contract of February 3, 1910, the company will build the following lines: A line running from Fortaleza, Porangaba, or other convenient point, to the town of Sao Francisco de Uruburetama; branch lines from Girau to Cratheus, and from Campa Maior to Amarracao; and a line connecting the Ceara system with the Bahia system, which will extend from Crato, Milagres, or some other point on the Ceara system, to Joazeiro, or other point of the Bahia system.

APPROVAL OF SURVEYS OF GOYAZ RAILWAY.

The Government, by decrees of July 10, 1911, has approved the final surveys and estimates of two sections of the main line of the Goyaz Railway, having a length of 223.60 kilometers and 155.738 kilometers, respectively, and of the branch line connecting Uberaba with S. Pedro de Alcantara, 222.221 kilometers long.

SURVEYS FOR NEW LINES AUTHORIZED.

Credits have been authorized for the surveys of the following lines: The extensions and branch lines of the Bahia system; the extension as far as Villa Platina of the Araxa-Uberaba branch; and for the proposed railway between Coroata, on the S. Luiz-Caxias Railway, and some point along the Tocantins River, in the State of Maranhao.

THE SOUTHERN SAN PAULO RAILWAY CO. (LTD.).

An English corporation known as The Southern San Paulo Railway Co. (Ltd.), has recently been registered in Brazil. The purpose of the company is to obtain from the government of the State of Sao Paulo, a contract or concession for the construction, equipment and operation of a railway in that State, connecting Santo Antonio do Juquia with Santos. The company also proposes to purchase or lease other lines and tramways with the object of operating them in connection with this line. The company is capitalized at £800,000.

TRANSFER OF CONTRACT FOR LEASE OF THE CENTRAL RAILWAY OF RIO GRANDE DO NORTE.

By a presidential decree of May 31, 1911, the contracts for the construction and lease of the Central Railway of Rio Grande do Norte have been transferred to the Companhia de Viação e Construcōoes (Transportation & Construction Co.).

CHILE

MESSAGE OF PRESIDENT RAMON BARROS LUCO.

On June 1, 1911, President Luco delivered his annual message to the opening session of the National Congress, covering the events of the administration during the fiscal year 1910–11. The President made tender reference to the lamented deaths of President Montt and Acting President Fernandez Albano, and spoke in terms of satisfaction concerning the recent centennial celebrations. He then commented on the friendly relations existing between Chile and the other countries, and made the following remarks anent the United States:

> Our relations with the United States tend to become still closer and more strengthened, to which end the development of our common economic and industrial interests will contribute greatly.
>
> The special homage paid by the Government of that country to the memory of our representative in Washington has compelled very sincerely the national gratitude.

The passage of several important bills was urgently recommended by the Executive. Prominent among these were the proposed law creating a department of agriculture and commerce as an independent executive branch, the reorganization of the diplomatic and consular services, the police force, and the Central Bureau of Statistics.

The President then reviewed the progress of the post and telegraph offices for the past year. He showed that the revenues of the post office department for the fiscal year 1910–11 amounted to 3,369,874.27 pesos gold of 18d., and expenditures to 4,065,773.86 pesos, the deficit being, therefore, 695,899.59 pesos, which shows nevertheless, a decrease of 137,747.37 pesos as compared with that of the previous year. The number of post offices in operation was 1,096, which during the year handled 69,831,492 pieces of mail matter. Of these, 33,822,821 paid postage to amount of 2,828,690.57 pesos, and 34,948,057 pieces were posted free. The international parcels post showed an increase in the volume of its business over 1909–10. The customs duties collected on the parcels aggregated 2,419,072.60 pesos gold, that is to say, 239,404.59 pesos more than in the previous year. The value of money orders handled by the various offices totaled 41,474,202.05 pesos, giving an increase of 5,671,734.21 pesos.

The number of telegraph offices operating in 1910–11 was 352, which transmitted 2,348,000 telegrams; of this total, 1,911,000 were paid and produced a revenue of 2,085,000 pesos, and 437,000 were sent free of charge. Fifteen new telegraph offices were opened during the year.

The message next showed that the Government had contributed nearly 7,000,000 pesos toward charitable measures, and stated that the most expedient method of curtailing this item of expense was through sanitary improvements. Touching on this point, it reported that the construction of sewer systems in various cities of the Republic were rapidly progressing. The sewer system of the capital was inaugurated on December 20, 1910, and cost 13,105,985.74 pesos. The Government has also recently inaugurated the Institute of Pediatrics, whose efforts are directed in the interests of the infant mortality question. The demographic statistics for 1910 were as follows: 129,999 births; 109,399 deaths; 19,352 marriages.

The president then cited statistics revealing a satisfactory and progressive condition of the educational system in the Republic.

In 1910 there were 2,716 primary schools with 4,829 teachers, an increase over 1909 of 334 schools and 371 teachers. The number of pupils registered was 258,875. The number of pupils in the 15 normal schools of the Republic was 2,222; a new normal school for girls was also created in 1910. There were 74 high schools with 18,669 pupils; 228 manual training schools, and 8 commercial institutes, with 2,296 students. The attendance at the University of Chile was 1,805 students, and at the Catholic University 685. There were also in 1910, 5 practical schools of agriculture, 3 mining schools, 2 schools of arts and crafts, and 30 professional schools for girls.

The message then dealt with the financial situation of the country, the revenues and expenses of the Government, the state of the public debt, and the foreign commerce, a detailed statement of which subjects appeared in the annual review of Chile for 1910, published in the August issue of the BULLETIN.

CONSTRUCTION OF SUBMARINES IN THE UNITED STATES.

The Electric Boat Co., of New London, Connecticut, has been awarded the contract for the construction of two submarine boats for the Chilean navy.

ARICA-LA PAZ RAILROAD.

On March 31, 1911, the status of the works on the Arica-La Paz Railroad was as follows:

Chilean section—the rails had been laid as far as kilometer 90.310; of these 28,640 kilometers are provided with rack rails. The telegraph line has been extended as far as kilometer 102. The expenses to that date amounted to £1,045,201.15.0, or 76.68 per cent of the total cost of the Chilean section.

Bolivian section—rails were laid as far as kilometer 140, and the telegraph line as far as kilometer 145. The amount spent was £741,894.8.4, or 67.14 per cent of the total value of the section.

PROPOSED NEW RAILROADS.

The board of public works of Chile has approved the following projects for new railroads:

Railway from Melipilla to Las Cabras: First section, from Las Cabras to Longovilo, 48 kilometers and 820 meters; branch from Las Cabras to El Carmen, 8 kilometers and 30 meters; branch from El Carmen to Longovilo, 40 kilometers and 690 meters.

Railway from Pinto to El Recinto, 29 kilometers and 1 meter.

THE GOVERNMENT RAILWAYS IN 1910.

The report of the director general of railways, recently submitted to the minister of industries and public works, shows that the general inventory of the State railways taken in 1910 gives a total value to all the lines, rolling stock, buildings, etc., of 405,745,564.34 pesos gold of 18d.

The movement of these railroads during the year was as follows: Merchandise transported, 4,489,205 tons, an increase of 516,739 tons, or 13 per cent, over 1909; number of passengers transported, 10,836,605, or an increase of 687,901, or 6.7 per cent; number of cars operated, 139,284, as against 128,269 in 1909.

The revenues amounted to 50,232,361.64 pesos gold of 18d., an increase of more than 3,000,000 pesos over 1909, and the expenses to 60,718,528.88 pesos, an increase of nearly 2,000,000. The balance of 1910 shows a deficit of 10,486,167.24, which was 1,078,331.11 less than that of 1909.

The total length of the railways owned and operated by the Government is at present 2,672 kilometers, including the Copiapo Railway, purchased by the Government in 1910, and extensions built during the year.

In order to wipe out the deficit of this service the Supreme Government has passed a new tariff of freight and passenger rates. The Government has also prepared a plan by which it is proposed to invest within the next five years, 30,000,000 pesos gold in the improvement and repair of the lines, bridges, and plants, and 100,000,000 pesos gold for double-tracking, construction of new bridges, repair of depots and workshops, and purchase of equipment.

COLOMBIA

ORGANIZATION OF DIPLOMATIC AND CONSULAR SERVICES.

With a view to organizing the diplomatic and the consular services of the Republic, President Restrepo, of Colombia, under date of June 1 last, issued a decree creating the position of chancellor in each of the following legations and consulates general of the Republic abroad: Legations at Washington, Paris, Rome, and Brussels; consulates general in New York, Paris, Brussels, and Antwerp. These new posts are to be filled by competitive examinations, and the applicants must be graduates in law from one of the following institutions: Faculty of Law and Political Sciences of Bogota, School of Law of the Greater College of Nuestra Señora del Rosario, or faculties of law of Medellin, Cartagena, Popayan, and Pasto.

Preference will be given to a chancellor of a legation or a consulate in filling vacancies in the posts of secretaries of legation, consuls, and other positions in the foreign office of Bogota.

REORGANIZATION OF THE DEPARTMENT OF PUBLIC WORKS.

As recently reorganized, the department of public works of the Republic of Colombia is at present divided into the following sections or bureaus:

Section I. General business, public lands, mines, and national forests.

Section II. Means of communication.

Section III. Public works, supply and storage of implements, furniture, and stationery.

Section IV. Agriculture, colonization, and immigration.

Section V. Auditing.

QUARANTINE STATIONS.

The President of the Republic of Colombia, in order to adequately equip the quarantine station of Puerto Colombia and to provide other ports with similar establishments, has authorized the following expenditures:

	United States currency.
Puerto Colombia:	
Building for epidemic contagious disenses, building for the personnel of the station, building for common diseases, laboratory, etc	$30,000
Wharf in front of the detention hospital	5,000
Buenaventura:	
Disinfecting plant, detention hospital, one Clayton apparatus with launch	10,000
Tumaco:	
Disinfecting plant, detention hospital, one Clayton apparatus with launch	10,000
Santa Marta:	
Building for the sanitary station	5,000
Total	60,000

TERRITORIAL CHANGE.

By virtue of a recent Executive decree, the Province of Arauca has been separated from the jurisdiction of the Department of Boyaca, and will hereafter be governed by a special commission constituted as follows: A special commissioner, who will also be agent of the National Government; the alcaldes (mayors) of the municipalities, and the police inspectors of the Province. The special commissioner shall have the same powers as the governors of departments. The Province is composed of the municipalities of Arauca, which will also be the capital, Arauquita, Cravo, Todos los Santos, and El Viento.

LOAN FOR BOGOTA.

The municipality of Bogota has entered into a contract with the banking firm of Myers & Co., of London, for a loan of £600,000, to be devoted to improvements in the capital.

This loan was authorized by a decree of President Restrepo, dated the 19th of April, 1911.

NATIONAL SCHOOL OF MINES.

There has been established in Bogota, Colombia, under the Department of Public Instruction of the Republic, a National School of Mines, in which the Government will maintain several students from each Department of the Republic. The director of the school is Dr. Tulio Espina.

EXPOSITION IN THE DEPARTMENT OF NARINO.

In accordance with a legislative assembly, there was unveiled in the city of Pasto a monument to Gen. Antonio Nariño, one of the foremost heroes of Colombian independence. In connection with the dedicatory exercises, there was inaugurated an exposition devoted to the industrial and agricultural interests of the country and competitions were held along musical, literary, and historical lines.

EXPORTS OF GOLD, SILVER, AND PLATINUM, 1910.

Official figures just received from Colombia give the amounts of gold, silver, and platinum exported from the country during the year 1910, as follows:

	United States currency.
Gold, in bars	$2,293,568.90
Gold dust	1,076,690.97
Silver, in bars	407,660.40
Platinum	260,632.88
Total	4,038,583.15

COSTA RICA

POSTAL MONEY-ORDER CONVENTION WITH CANAL ZONE.

Under date of May 15, 1911, the President of the Republic of Costa Rica approved the convention for the exchange of postal money orders between that country and the Canal Zone of the Isthmus of Panama, signed at Washington on February 20, 1911, by Sr. Joaquin Bernardo Calvo, minister of Costa Rica, and Mr. Frank Hitchcock, Postmaster General, and Mr. J. M. Dickinson, Secretary of War, of the United States.

APPROVAL OF CONVENTION WITH THE UNITED STATES.

The Congress of Costa Rica has approved the convention signed at San Jose by the minister of foreign affairs of the Republic and the chargé d'affaires of the United States, on June 10, 1911, to fix the condition of naturalized citizens who renew their residence in the country of their origin.

NATIONAL EDUCATION FUND.

For the purpose of providing the boards of education of the Republic with revenues for the purchase or construction of buildings and to meet other expenses of primary instruction, the Congress of Costa Rica has created a new impost of 10 centavos on every liter of aguardiente and other native liquors sold in the national factory and its branches and agencies. The product of this new tax shall constitute the National Education Fund.

LOAN FOR PUNTARENAS.

The municipality of the canton of Puntarenas, Costa Rica, has been authorized by the National Congress to raise a loan for 90,000 colones for the construction of a building to be used as a market in the capital of the canton. The loan may be made with the subsidiary guaranty of the central government, but the interest shall not exceed 10 per cent annually.

PORT WORKS IN PUNTARENAS.

The President of Costa Rica has been authorized by Congress to order the study and survey of such works as may be needed in the improvement of the port of Puntarenas for the purpose of facilitating shipping and trade in general.

CUBA

DIPLOMATIC CHANGES.

A law of the Cuban Congress, published in the Gaceta Oficial of July 1, 1911, makes the following orders affecting the diplomatic service of the Republic:

The posts of envoy extraordinary and minister plenipotentiary are created for Peru, Colombia, and Venezuela.

The ministers resident at Brazil, Chile, Belgium, and Norway are raised to the rank of envoys extraordinary and ministers plenipotentiary.

The post of minister resident in Uruguay is abolished, and the minister plenipotentiary at the Argentine Republic shall also be accredited to Uruguay and Paraguay.

The minister to Chile shall also be accredited to Bolivia; and the minister plenipotentiary in Colombia shall represent Cuba in Ecuador. The chief executive is authorized to accredit the minister plenipotentiary in Norway to Sweden and Denmark, and the minister in Germany to Russia and Austria.

A secretary of first class is provided for the legation at Montevideo, and secretaries of second class for each of the following legations:

Rio Janeiro, Brazil; Santiago, Chile; Lima, Peru; Bogota, Colombia; and Caracas, Venezuelà.

The following new consulates are created: Consuls general in Paris and Panama; consuls of first class in Asuncion (Paraguay), La Paz (Bolivia), and San Jose (Costa Rica); and consul of second class in Quito (Ecuador). A chancellor of first class is provided for the consulate general at Panama, and another of second class for the consulate at San Jose de Costa Rica.

Diplomatic functions in the capacity of chargés d'affaires are vested in the consul general at Panama, and the consuls at San Jose de Costa Rica and Guatemala City. Like functions in the capacity of chargés d'affaires ad interim are given to the consuls at Asuncion, La Paz, and Quito.

CODE OF COMMERCE AMENDED.

The Gaceta Oficial of Cuba for June 29, 1911, publishes the text of a law introducing extensive amendments to the Code of Commerce of the Republic. Articles 870 to 873, relating to the procedure in the suspension of payments and bankruptcy proceedings, are totally amended.

NATIONAL BOARD OF FISHERIES CREATED.

For the purpose of scientifically promoting and protecting the fishing industry of the Republic, the President of Cuba has issued a decree creating a national board of fisheries, as a dependency of the department of agriculture, commerce, and labor. The new board will have charge of all matters relating to exploitation of the national waters of Cuba, and of the enforcement of laws and provisions on fishing. It is also charged with the duty of preparing and publishing a set of fishing regulations, and statistics; and of organizing a national museum of fisheries.

MUNICIPAL BUDGET OF HAVANA FOR 1911–12.

The municipal council of Havana, on June 17, 1911, approved the city budget. The revenues are estimated at $3,936,566.35, and the same amount is appropriated for expenditures. In 1910–11 the revenues aggregated $4,005,057.22, and the expenditures $3,992,744.9.

MONUMENT TO ESTRADA PALMA.

In Cardenas, Cuba, there has been unveiled a magnificent monument erected to the memory of the late Tomas Estrada Palma, the first President of the Republic of Cuba.

COMPETITION FOR MODELS OF MACEO'S STATUE.

The Cuban Government has issued an invitation to all sculptors of the world to take part in the competition for models of an equestrian statue of Gen. Maceo, the Cuban hero who was killed at Punta Brava in 1896. The statue is to be of bronze and shall be erected in the Maceo Park of Havana. Six months are given the artists to present their plans, and a prize of $5,000 is offered to the winner.

Further particulars may be obtained by applying to the Cuban legation at Washington and the various consulates of the Republic in the United States.

NEW PALACE OF JUSTICE AT PINAR DEL RIO.

The sumptuous new building for the palace of justice at Pinar del Rio, Cuba, was formally dedicated on June 21, 1911, by the secretary of justice of the Republic and in the presence of a distinguished gathering. The general appearance of the palace is very much like that of the new building of the Pan-American Union at Washington, D. C.

NEW RAILROAD CONCESSIONS.

The Cienfuegos, Palmira & Cruces Railway & Power Co. has secured another concession from the Cuban Government for the construction of the following branches of the main line in the Province of Santa Clara: (*a*) From Palmira to Rodas; (*b*) from Cruces to La Isabela; (*c*) from Cruces to Caibarien, by way of Santa Clara, Loma Cruz, and Camajuani; (*d*) from Camajuani to Fomento, on the Manicaragua line, by way of Salamanca, Placetas, and Nazareno; (*e*) a branch which extends the line to the Manicaragua railway shall pass Fomento and Sancti Spiritus and terminate at Tunas de Zaza.

The Chief Executive has been authorized to enter into a contract for the construction of a line from Guantanamo to Baracoa. He is also empowered to grant a subsidy of $12,000 per kilometer to the company undertaking the work.

The Havana Central Railway has been granted a concession for the construction of a branch road to San Jose de las Lajas and Santa Cruz del Norte, via Jaruco, the company to receive a subsidy of $5,000 per kilometer of track.

A like subsidy is granted to the United Railways for the construction of a branch line from Matanzas to Canasi.

DOMINICAN REPUBLIC

BUDGET FOR 1911-12.

The budget law for the fiscal year 1911-12, recently approved by the National Congress of the Dominican Republic, estimates the revenues at a total of $4,257,000, and fixes the expenditures at

$4,256,804, the latter being distributed as follows among the various departments:

Legislative	$118,644
Executive	27,020
Judiciary	207,166
Interior and police	644,359
Foreign affaires	101,624
Finance and commerce	1,945,500
War and marine	537,982
Justice and public instruction	$263,729
Agriculture and immigration	109,920
Promotion and communications	300,860
Total	4,256,804

AMENDMENT TO THE CODE OF COMMERCE.

The National Congress of the Dominican Republic has passed a law amending the Code of Commerce. Articles 446, 451, 462, and 591, relating to bankruptcy proceedings, are thereby entirely modified.

NEW LAWS OF GENERAL IMPORTANCE.

The Gaceta Oficial for April 12 and 29, and May 3, 17, and 24, 1911, publishes, respectively, the texts of the following laws passed and promulgated: Police law; division of lands held in joint tenure; procedure in appeals to Supreme Court; telegraph and telephone law; patents of invention.

CODE OF CRIMINAL PROCEDURE AMENDED.

The National Congress of the Dominican Republic has passed a law, whose text is given in the Gaceta Oficial for July 12, 1911, amending the Code of Criminal Procedure of the Republic.

LAW OF AGRICULTURAL FRANCHISES.

The Gaceta Oficial of the Dominican Republic, for July 8, 1911, publishes the text of an important law of the National Congress, approved on June 26, 1911, granting liberal franchises and privileges to persons and companies engaged in the cultivation of lands.

IMPORTANT PUBLIC WORKS.

The National Congress of the Dominican Republic has authorized the construction of the following public works: Aqueduct for the capital, $500,000 gold; highway from Santo Domingo to Seybo, by way of San Pedro Macoris, $60,000 gold; building for the school of electrical engineering, $30,000 gold; building for a hospital for inebriates, at Puerto Plata, $10,000 gold, and building for a school of commerce in Santo Domingo, $10,500 gold.

The sum of $22,000 has also been appropriated as the contribution of the Government to the construction of the Civil Hospital at Santiago de los Caballeros.

NATIONAL BANK.

A group of New York bankers and merchants have organized a national bank in Santo Domingo, the capital of the Dominican Republic, with an authorized capitalization of $2,000,000. The institution will be governed according to the Dominican laws, and will establish branches throughout the Republic.

SURVEY OF SAN MARCOS AND BARRABAS LINE.

The survey now being carried on by engineers of the Central Railroad for the deviation of the rack railroad from San Marcos to Barrabas, is progressing rapidly. On the coast side the survey has reached as far as Barba Rusia, and on the side of Bajabonico it will soon reach that point. Upon the completion of the survey the construction of the line will be started. This railroad will establish a more rapid and comfortable communication between Santiago and Puerto Plata.

ECUADOR

NEW MINISTER TO THE UNITED STATES.

Sr. Don Abelardo Moncayo has been appointed by the President of Ecuador as envoy extraordinary and minister plenipotentiary at Washington, to succeed Sr. Don Rafael M. Arìzaga, who has recently resigned.

CREATION OF A NAVAL SCHOOL.

By a presidential decree of recent date, a naval school has been established in Quito for the preparation of young men desiring to enter the naval service of the Republic.

THE MANTA RAILROAD.

Work has been started on the construction of the railroad from the port of Manta to Santa Ana. The survey of the line will continue from Monte Cristi to Portoviejo and from this point to Santa Ana. The section from Monte Cristi to Portoviejo will pass through Picoaza, from which point a branch line will be constructed to Riochico and Rocafuerte.

EXPORTS OF COFFEE FROM GUAYAQUIL.

The exports of coffee from the port of Guayaquil, Ecuador, during the years 1907 to 1910 were as follows:

	Sacks.
1907	8,157
1908	25,598
1909	24,170
1910	24,898

The bulk of these exports was shipped to Chile, that country receiving the following amounts: 1907, 7,382 sacks; 1908, 13,324 sacks; 1909, 18,971 sacks; 1910, 15,304.

GUATEMALA

ELECTION OF DESIGNATES.

Gen. Mariano Serrano and Gen. Manuel Duarte have been elected by the National Legislative Assembly of Guatemala as first and second designates, respectively, to fill the office of Presidency of the Republic in case of a vacancy in the present term.

WATER-POWER LAW.

The Legislative Assembly of Guatemala has enacted a law providing that all waterfalls within public lands shall be reserved for the absolute property of the Government, which shall have the sole power to regulate the use that may be made thereof for industrial and other purposes. Waterfalls in private lands are the property of the respective owners, but if they are to utilize or sell them, they must register them in the department of promotion.

RATIFICATION OF CENTRAL AMERICAN CONVENTIONS.

The Legislative Assembly of Guatemala has approved, and the President of the Republic has ratified, the following six conventions signed at the Third Central American Conference held at the city of Guatemala in January, 1911:

Establishment of freedom of commerce in the five Central American Republics.

Unification of primary and secondary instruction in Central America.

Establishment of coastwise commerce among the five Republics.

Establishment of a practical school of agriculture in the Republic of Salvador; of a school of mining and mechanics in the Republic of Honduras; and of a school of arts and crafts in the Republic of Nicaragua.

Amending article 3 of the Consular Service Convention and article 4 of the convention regarding the duties of the Central American International Bureau.

NEW ISSUE OF POSTAGE STAMPS.

The President of Guatemala has issued a decree providing for a new issue of postage stamps to the amount of 1,000,000, as follows:

50-centavo stamps	500, 000
20-centavo stamps	200, 000
12½-centavo stamps	200, 000
1-centavo stamps	100, 000
Total	1, 000, 000

Under the same decree a London concern has been awarded the contract for printing of this issue.

FISCAL BUDGET FOR 1911-12.

The general budget of expenditures, recently approved by the Legislative Assembly of the Republic of Guatemala, fixes the expenses of the Government for the fiscal year ending June 30, 1912, at the sum of 37,417,217.12 pesos, distributed as follows among the various executive departments:

	Pesos.
Interior and justice	4, 658, 359. 96
Foreign affairs	1, 283, 199. 20
Finance	1, 808, 054. 00
Public credit	22, 000, 000. 00
Promotion	2, 271, 360. 96
War	2, 343, 996. 40
Public instruction	2, 578, 760. 00
Pensions	473, 486. 60
Total	37, 417, 217. 12

HAITI

TRANSMISSION OF EXECUTIVE POWER.

On August 14, 1911, Gen. Cincinnatus Leconte was unanimously elected President of the Republic by the Haitian Congress to succeed President Antoine F. C. Simon.

DIPLOMATIC CHANGES.

A newspaper cable dispatch from Port-au-Prince advises that President Leconte has announced the following appointments in the diplomatic service of Haiti: Mons. Solon Menos has been accredited to the United States to succeed retiring Minister Sannon; Mons. Nemours Auguste, minister to France; Mons. Calisthenes Fourchard, minister to Germany; Mons. Dorsain Ville, chargé d'affaires of the legation at London; Mons. Ulrick Duvivier, chargé d'affaires of the legation at Havana; Mons. Catinat Fourchard, consul general at New York, and Mons. Geffrard Ovest, consul general at Antwerp.

PROPOSED AGRICULTURAL BANK.

A syndicate of Austrian and Belgian capitalists has submitted a new request to the Government for a concession to establish an agricultural and industrial bank, capitalized at 10,000,000 francs represented by 20,000 shares of 500 francs each.

PROPOSED NEW WHARF AT CAPE HAITIEN AND AT PORT DE PAIX.

A bill has been presented to the Haitian Government granting a concession to Mr. Gerson Desrosiers for the construction, maintenance, and exploitation of a wharf at the port of Cape Haitien. By the terms of the contract the concession is to run for 50 years, dating from the promulgation of the law authorizing the concession. The wharf is to be provided with railroad tracks, cars, platforms, cranes and all the necessary machinery for loading and unloading merchandise and the rapid transportation of parcels to the customs houses. The Government grants to the concessionaire a site near by for the erection of an office building.

The concessionaire has the exclusive privilege of handling all the merchandise and products on this wharf. He is authorized to collect the wharf dues from steamers or sailing vessels which do or do not dock at the wharf.

The contract relating to the construction of a wharf at Port de Paix is in most respects similar to the above, except that the concession runs for 40 instead of 50 years.

FRANCO-HAITIAN ORGANIZATION IN PARIS.

A Franco-Haitian Association has recently been organized in Paris for the purpose of developing the intellectual and economic relations which unite France and the Haitian Republic.

HONDURAS

NEW STAMP-TAX LAW.

La Gaceta, the official organ of the Government of Honduras, publishes in its issue for April 24, 1911, the text of the new stamp-tax law. It provides that the stamped paper to be used in transactions with the Government and in judicial proceedings shall be of two kinds: One of 50 centavos each page, and the other of 10 centavos a page. The stamp will represent the national coat of arms, under which shall be expressed the value and the four-year period for which the paper is issued.

The stamps, also representing the national coat of arms, shall be of the following denominations: 1, 2, 5, 10, and 50 centavos.

COAL AND OIL CONCESSION.

A group of local capitalists has recently obtained from the Government of Honduras an important concession whereby they are given the exclusive privilege of extracting and exploiting coal, petroleum, naphtha, and other products that may be found within an area of 1,000 hectares, situated in the municipality of El Rosario, Department of Comayagua. The Government is to receive 10 per cent of the products of the exploitation, either in merchandise or in money, as it may choose, and the concessionaires shall have the right to import free of customs duties all machinery and materials needed for the operation of the contract, the term of which is 50 years.

NEW INDUSTRIES.

A concession has recently been granted by the Government of Honduras for the cultivation, on an extensive scale, of sugar cane in the Department of Atlantida. By the terms of the contract the industry is exempted from national and municipal taxation.

Another concession has been granted for the establishment in Tegucigalpa or Sabanagrande of a plant for the manufacture of soap, candles, and perfumes.

MEXICO

APPROPRIATION LAW FOR 1911-12.

The appropriation law recently passed by the Mexican Congress fixes the expenditures of the Federal Government for the fiscal year 1911-12 at 105,432,346.99 pesos Mexican currency, distributed as follows, among the various departments:

	Pesos.
Legislative power	1,503,255.25
Executive power	259,749.00
Judicial power	625,441.25
Foreign affairs	2,075,445.50
Interior	15,115,940.71
Justice	1,626,355.50
Public instruction and fine arts	7,703,282.00
Promotion	4,092,770.00
Communications and public works	16,051,156.74
Finance and public credit	35,071,541.72
War and marine	21,307,409.32
Total	105,432,346.99

FREE IMPORTATION OF CORN.

In view of the continued scarcity in the production of national corn in the Peninsula of Yucatan, the President of Mexico has extended until September 30, 1911, the operation of the decree declaring free of customs duties the importation of that grain through the custom-houses of Progreso and Campeche.

NEW LOAN NEGOTIATED.

The Mexican Government has recently entered into a contract with the firm of Speyer & Co., of New York City, for a loan of $10,000,000 United States currency, at 4½ per cent interest, and payable within two years. The loan is represented by notes of the Monetary Commission of Mexico, authorized by the Government, and guaranteed by the National Bank of Mexico.

INFORMATION BUREAU IN THE UNITED STATES.

For the purpose of furnishing reliable and accurate data as to the commercial possibilities of Mexico, the Government of that Republic has established an information bureau in New York City. In connection with the bureau there will be a complete exhibit of Mexican products, and pamphlets on the agricultural, mineral, and industrial possibilities of the Republic will be issued from time to time. The object of the bureau is primarily to increase the business between the two nations and bring the respective interests into closer relation.

PUBLIC WORKS AUTHORIZED IN THE FEDERAL DISTRICT.

By resolution of President de la Barra the hydrographic commission of Mexico will undertake the following works in the Federal District for the purpose of giving an impetus to works of general utility, which are greatly needed, and incidentally furnishing employment to a large number.

Extension to the south of the great drain canal to the cities south of the valley of Mexico, Tacubaya, Mixcoac, San Angel, Tlalpam, etc.

Improvement of the drain works of Zumpango.

Dredging of rivers, lakes, and channels of the valley of Mexico.

The director general of public works will likewise proceed with the repair of the roads from the capital to Cuernavaca, Tlanepantla, Toluca, and Pachuca, and paving the streets of the Colonias Bolsa, Maza, Valle Gomez, and Santa Julia.

MEXICAN EXPORTS AND IMPORTS THROUGH PORT OF SAN DIEGO, CALIFORNIA.

The Pan American Union is indebted to Dr. J. Diaz Prieto, the consul of Mexico at San Diego, California, for the statement of the exports to and imports from Mexico through that port for the month of May, 1911, as compared with the corresponding month of 1910.

According to Dr. Prieto's statement there was imported from Mexico through this port miscellaneous merchandise to the value of $109,601, as against $28,220 for the preceding year, revealing a remarkable increase in favor of May, 1911, of $81,381. In the matter of exports to Mexico the value of products for May, 1911, totaled $39,151, against $88,193.71 for May, 1910, a decrease in the present year of nearly $50,000.

SUSPENSION BRIDGE IN MONTEREY.

There is a project on foot to erect a cable suspension bridge across the Santa Catalina River to connect the suburb of San Luisito with the city of Monterey. It is proposed to build this bridge 600 feet long and 20 feet wide.

NEW BRIDGE IN NUEVO LAREDO OPENED.

The new bridge built by the National Railroads of Mexico, between Nuevo Laredo, State of Tamaulipas, and Laredo, Texas, has been opened to public traffic. It is made of concrete and consists of 6 arches of 175 feet.

RAILROAD CONCESSIONS.

The Mexican Government has entered into a contract with an American company for the construction and operation of a railroad to connect the southern part of the State of Veracruz and of the State of Tabasco, with the central part of the State of Campeche, joining at one end with the Veracruz-Pacific Railway, and at the other with the Yucatan railroads. The new line will be known as the Veracruz, Tabasco and Campeche Railroad.

Authorization has also been granted to build and operate a railroad in the State of Mexico, starting from the city of Toluca, passing near Villa del Valle and terminating at the Caleras ranch.

NICARAGUA

REPEAL OF CONCESSIONS.

The Gaceta Oficial of Nicaragua, in its issue of May 13, publishes the text of a decree by the President of the Republic, whereby a number of concessions are repealed as being, to a greater or less degree, detrimental to the good and welfare of the country. Among the concessions declared null and void are the following:

Concession dated March 29, 1904, for the establishment of a steamship line on the Atlantic coast and for the navigation of the Escondido River, and all additional contracts. Concession of December 6, 1907, granting a lease on abandoned mines in the Department of Bluefields and the Prinzapolka District. Of December 18, 1910, granting a lease on all the mines and mineral deposits in the Departments of Nueva Segovia and Jinotega and a section of the region of Cape Gracias à Dios. Of August 2, 1905, for the exploitation of rubber fields on the Atlantic coast. Of July 24, 1906, for the dredging of Pearl Lagoon.

PANAMA

IMMIGRATION AND COLONIZATION COMMISSIONER ABROAD.

The position of special immigration and colonization commissioner abroad has been created by executive decree of June 8, 1911. The duty of this office will be to carry on an active propaganda in Europe, giving information concerning the Republic of Panama, its physical, political, and social conditions, natural resources, cost and manner of acquiring public lands, cost of living, and other like data as may be desired. The commissioner will also discharge such other duties as may be assigned to him by the department of promotion. His place of residence in Europe shall be fixed later by the President of the Republic. Sr. Gil F. Sánchez has been appointed to the new post.

DEDICATION OF THE NATIONAL INSTITUTE.

The magnificent and spacious buildings of the National Institute at Panama City were formally dedicated by President Arosemena on June 18, 1911, with imposing ceremonies and in the presence of a distinguished gathering.

The National Institute was created by law of March 8, 1907, and inaugurated on April 25, of the same year. The main purpose of this organization is to unify and improve the system of higher instruction of the Republic by merging into one institution the High School, the College of Commerce and Languages, and the Normal School.

The new buildings are 6 in number and cover a total area of 11,624 square meters. The main or central building faces Ancon Avenue with a frontage of 73 meters.

PANAMA AT THE AGRICULTURAL COLLEGE OF LIMA.

The Government of Panama, through its foreign office, has accepted an offer from the Peruvian Government of four scholarships in the College of Agriculture of Lima. The school is a high-grade institution, under Peruvian and European professors, and the instruction is thoroughly scientific and adapted to tropical agriculture. The selection of pupils for the scholarships has been made by the department of public instruction of Panama.

PARAGUAY

THE BUDGET FOR 1911.

The general budget law of the Republic of Paraguay, passed by the National Congress on June 5, 1911, estimates the revenues at a total of 2,738,000 pesos gold, and 9,190,500 pesos paper. The expenditures are fixed at 999,411 pesos gold and 32,687,228.30 pesos paper.

The estimate of revenues is as follows:

	Gold.	Paper.
	Pesos.	*Pesos.*
Customs receipts	2,399,000	867,000
Internal revenue		4,243,500
Miscellaneous	47,000	581,000
New taxes	292,000	3,499,000
Total	2,738,000	9,190,500

The expenditures are distributed as follows among the various departments:

	Gold.	Paper.
	Pesos.	*Pesos.*
Legislative Congress		1,115,600.00
Interior	13,679.00	9,453,812.30
Foreign affairs	102,332.80	528,480.00
Finance	5,400.00	3,550,440.00
Justice, worship, and public instruction	42,360.00	8,516,300.00
War and Navy	120,040.00	7,686,596.00
Miscellaneous	715,600.00	1,836,000.00
Total	999,411.00	32,687,228.30

NEW LOANS.

The President of Paraguay has authorized the minister plenipotentiary of the Republic to France, Great Britain and Germany to negotiate with European capitalists for raising a loan of 25,000,000 francs.

NEW TAXES.

A decree of the President of the Republic of Paraguay, dated June 1, 1911, establishes the following new taxes:

(*a*) 5 pesos per head of cattle killed for public consumption.

(*b*) 1 peso per head of cattle sold or exchanged.

(*c*) A surtax of 17 per cent on the importation of alcoholic beverages.

(*d*) 50 centavos per liter on sales of alcohol of national production.

(*e*) 3 per cent on all imports, as an additional customs duty.

(*f*) $1.60 gold per ton of quebracho exported.

(*g*) $1.30 gold per ton of wood, other than quebracho, exported.

(*h*) 15 centavos per 10 kilograms of yerba mate, as an additional duty to the transportation tax.

(*i*) 1 mil on real estate, as an additional impost to the direct tax.

(*j*) 1 peso per pack of cards, whether of foreign or domestic manufacture.

Packing houses operating under a concession are exempt from the tax provided by paragraph (*a*). Alcohol for industrial purposes is likewise exempt from taxation.

NEW ISSUES OF BANK NOTES.

The board of directors of the Agricultural Bank of Asuncion, Paraguay, has been authorized to enter into a contract with the American Bank Note Co. for printing a new issue of bank notes to the sum of 15,000,000 pesos national currency. The issue will be of the following denominations: 2,000,000 notes of 50 centavos, 1,000,000 of 1 peso, 500,000 of 2 pesos, 400,000 of 5 pesos, 300,000 of 10 pesos, 150,000 of 20 pesos, 40,000 of 50 pesos, 10,000 of 100 pesos, 2,500 of 200 pesos, and 1,000 of 500 pesos.

RAILROAD CONCESSION ANNULLED.

A Presidential decree of May 26, 1911, declares null and void the concession granted on June 1, 1909, for the construction of a railroad line from Asuncion to the mouth of the Iguazu, and orders the forfeiture of the 10,000 pesos gold deposit. Failure on the part of the concessionaire to fulfill the conditions imposed on him by the contract is given as the reason for the annullment.

PERU

NEW PERUVIAN CABINET.

A newspaper cable dispatch from Lima advises that a new cabinet has been appointed by President Leguia, and that the oath of office was administered to the following members on August 31, 1911.

Minister of Government and Police: Juan Salazar Oyarzabal.

Minister of Justice and Public Instruction: Augusta Ganoza.

Minister of Foreign Affairs: Dr. German Leguia Martinez.

Minister of War and Navy: Juan Manuel De la Torre.

Minister of the Treasury and Commerce: Augustin De la Torre Gonzalez.

Minister of Public Works and Promotion: Daniel Isaac Castillo.

NEW PROVINCE CREATED.

El Peruano, the official organ of the Peruvian Government, publishes in its issue for June 26, 1911, a law of the National Congress dividing the Province of Cangallo into two sections, each of which shall constitute a separate Province, as follows:

The Province of Cangallo, having for its capital the city of the same name, and comprising the districts of Cangallo, Huambalpa, Vischongo, and Paras; the towns of Quispillacta and Cancha-Cancha, and the hacienda of Chacolla, in the district of Chuschi, and the towns of Toto, Paras, Anos, and Ayuta, in the district of Totos, all with their present boundaries.

The Province of Fajardo, having for its capital the city of Huancapi, and comprising the districts of Canaria, Hualla, Colca, Huancaraylla, Carapo, and Sancos, with their present boundaries. This new Province shall include, besides, two new districts: That of Sarhua, including the towns of Yomangua, Huarcaya, Anquilla, and Sarhua, which latter shall be its capital, and the district of Vilcanchos, comprising the towns of Cocas, Urancancha, Espite, and Vilcanchos as the capital.

SURVEY OF PORT WERTHEMAN RAILROAD.

Since the latter part of June, 1911, a commission of engineers has been actively engaged in the survey of the railroad from Oroya to Port Wertheman, on the Perene River. The survey will be divided into two sections, one from Oroya to Tarma and another from Tarma to Port Wertheman.

THE ZELA CENTENNIAL.

In commemoration of the one hundredth anniversary of June 20, 1811, the day on which the Peruvian patriot, Francisco Antonio de Zela, uttered the first cry of independence in the city of Tacna, there were held in the capital of Peru on June 20, 1911, impressive and elaborate events under the auspices of the Historical Institute of Peru. The main feature of the celebration was a splendid civic parade, in which there participated Government and municipal officials, scientific, literary, and educational institutions, charitable and labor organizations, and public and private schools. On the same day and with imposing ceremonies the name of Zela was affixed to the Plaza de la Micheo.

NEW PERUVIAN-PANAMA VESSEL.

Consul General W. Henry Robertson, of Callao, reports the arrival there of the new steel steamship *Pachitea* of the Compañía Peruana de Vapores y Dique del Callao. This will be added to the company's fleet for fast mail, passenger, and cargo service between Peruvian ports and Panama. The new vessel cost $463,200 and has a gross displacement of 4,681 tons, but registered in French Lloyds at 2,250.

SALVADOR

EXTRADITION TREATY WITH THE UNITED STATES.

The ratifications of the extradition treaty between Salvador and the United States were exchanged at San Salvador on July 10, 1911. The treaty was signed by the Minister of Foreign Relations and the United States Minister at the Salvadorean capital on April 18, last.

BUDGET FOR 1911-12.

The budget of revenues and expenditures, recently passed by the National Legislative Assembly of Salvador, for the fiscal year 1911-12, fixes the estimated revenues at a total of 13,129,750 pesos as against expenditures amounting to 13,286,750 pesos, leaving a deficit of 157,082.50 pesos.

INCREASE OF POPULATION.

According to figures compiled by the General Bureau of Statistics of Salvador, and published in the Diario Oficial of May 22, 1911, there has been an increase in the population of country, during the first quarter of 1911, of over 6,600.

EMPLOYERS' LIABILITY LAW.

The National Legislative Assembly of the Republic of Salvador has enacted a law, the text of which is published in the Diario Oficial for May 13 last, establishing the liability of employers for accidents caused to laborers while in the performance of their duties. The industries that fall within the provisions of the law are: Mining establishments of all kinds; establishments where explosives, inflammables, injurious or poisonous matters are manufactured or employed; automobile, railroad, or steamship transportation; fire departments; electric light and power plants.

CORPORATION TAX.

The Diario Oficial of Salvador, for May 12, 1911, contains the text of a law imposing a tax of 6 per cent per annum on the net profits of all stock companies operating in the Republic.

CODE COMMISSION.

The National Legislative Assembly of the Republic of Salvador has created a commission of three lawyers which shall be charged with the preparation and drafting of a new code of criminal procedure to supersede the one in force.

The draft of this new code must be submitted to the President of the Republic on March 1, 1912, who shall in turn forward it to the Assembly during its sessions of the same year.

PREPARATORY SCHOOL OF ENGINEERING.

President Araujo, of Salvador, has recently decreed the establishment in the capital of the Republic of a preparatory school of engineering, where young men desiring to pursue this profession may fit themselves for admission to the technical schools abroad.

URUGUAY

BUDGET BILL FOR 1911-12.

The Diario Oficial, of Uruguay, for June 2, 1911, publishes the text of the President's message submitting to the General Assembly the national budget for the fiscal year 1911-12. According to the message, no great difficulties were encountered in the preparation of this financial statement on account of the general improved economic condition of the country. The budget submitted provides for a slight surplus, and estimates the revenues and expenditures as follows:

	Uruguayan pesos.
Revenues estimated	28, 534, 000
Expenditures	28, 533, 019

LEGATION ACCREDITED IN CUBA.

The Government of Uruguay has created a legation at Havana, Cuba, and has appointed Sr. Don Rafael J. Fossalba, envoy extraordinary and minister plenipotentiary to that post.

AGRICULTURAL COMMISSION.

A commission with Dr. Carlos Praderi at its head has been appointed by the Uruguayan Government to visit Europe and the United States for the purpose of studying and ascertaining the most modern agricultural methods. The commission intends to arrange for the purchase of farming implements, seeds, and possibly live stock.

URUGUAY AT THE HAGUE COURT.

To represent the Republic in the Permanent Arbitration Court at The Hague, President Battle Ordoñez, of Uruguay, has appointed two eminent jurists and educators, Sr. Don Juan Zorrila de San Martin and Sr. Jose Pedro Massera.

NEW NATIONAL HOLIDAY.

A law of the General Assembly, published in the Diario Oficial for June 15, 1911, declares May 18, the anniversary of the Battle of Las Piedras, a legal holiday, to be observed every year.

PROPOSED LABOR LAW.

A detailed statement of the labor law submitted to the General Assembly of Uruguay appears in the Uruguay Weekly News of July 9. According to this report, the principal features of the law are as follows: An eight-hour working day for all workmen, including industrial and commercial employees; one day of rest after every six working days; State pension for working women just before and after confinement, during which period they will not be allowed to work, such pension to be paid by the State pending legislation on insurance and workmen's savings banks; and provision for special inspectors who will command the confidence of the working classes, to see that the provisions of the law are observed in factories, workshops, and offices.

GOVERNMENT PACKING HOUSE.

The General Assembly of Uruguay has passed a law authorizing the President of the Republic to enter into a contract for the establishment of a complete meat-packing plant, to be conducted along the lines followed by the leading packing houses of the United States. The capital of this establishment is fixed at £200,000, £110,000 of which is to be taken up by the Government and the remainder to be offered to public subscription.

ARCHITECTURAL COMPETITION.

The Government of Uruguay has instituted a competition for designs for a new Government Palace, and urban planning in Montevideo. The conditions and regulations governing the contest may be obtained upon application to the department of public works (Ministerio de Obras Publicas), Montevideo, Uruguay, or to the Uruguayan Legation at Washington, D. C. Designs for the urban planning must be submitted not later than January 16, 1912, to the legation, or January 29, to the Department of Public Works, and January 30 for the Government Palace.

RAILROAD NOTES.

The Central Railroad of Uruguay has been authorized to construct a connecting curve between the main line of the northern extension and the projected extension to Rivera and the Brazilian frontier.

With appropriate exercises, the minister of public works of Uruguay inaugurated the branch line from Algorta to Fray Bentos, of the Midland Railway. In connection with the new line, there has been constructed at Fray Bentos a wharf 224 meters long and 15 meters wide, at a cost of $200,000 Uruguayan currency.

VENEZUELA

REVISION OF NATIONAL CODES.

By a joint resolution of the National Congress of Venezuela, there has been created a commission of five, composed of the Minister of Interior, chairman, two senators, and two deputies, to revise the national codes. The commission is required to submit its report and recommendations to the National Congress during its sessions of 1912.

BUDGET FOR 1911-12.

The Gaceta Oficial, of Venezuela, for July 10, 1911, publishes the text of the general budget of public revenues and expenditures for the fiscal year ending June 30, 1912. The revenues are estimated at a total of 51,131,250 bolivares, and the expenditures at a similar amount, apportioned among the various departments as follows:

	Bolivares.
Interior relations (including the legislature, presidency of the Republic, and judiciary)	11,154,800.74
Foreign affairs	1,018,000.00
Finance and public credit:	
Finance	3,916,300.00
Public credit	15,009,499.98
War and marine	7,968,561.00
Promotion	3,386,635.00
Public works	3,000,000.00
Public instruction	3,375,126.00
Deficiency appropriations	1,052,327.28
Incidental expenses	1,250,000.00
Total	51,131,250.00

CONVERSION OF CERTAIN PUBLIC DEBTS.

In view of the fact that there are still some various public debts which have not been presented for conversion, the Congress of Venezuela has enacted a law fixing a period of five months, August 1 to December 31, 1911, within which the holders of such bonds may present them for conversion into the national internal consolidated debt of 3 per cent.

The conversion shall be effected by the board of public credit under the following conditions: Bonds of the national internal debt of 6 per cent shall be accepted at par; bonds of the floating debt also at par; bonds of the national consolidated debt of 5 per cent at 85 per cent; bonds of the revolution debt at 15 per cent. Failure to present the bonds within the prescribed time shall invalidate them.

NAVIGATION AND COLONIZATION CONTRACT.

On June 7, 1911, there was signed at Caracas, between the Venezuelan Government and the Compañia Nacional de Navegacion Fluvial (National River Navigation Co.), an important contract for the river and coastwise navigation of the Republic, canalization of rivers, exploitation of salt deposits and other natural resources, colonization, and construction of railroads in the national territory of the Amazonas. By the terms of this contract there are also included, slightly modified, the previous concessions acquired by the company, either directly or by transfer, such as the coastwise service between Maracaibo and Ciudad Bolivar and way ports, the administration of the Government salt works, the Maracaibo Lake steamboat service, the coastwise service between La Guaira and Rio Chico, Carrenero, etc., the navigation of the Gulf of Paria between Ciudad Bolivar and San Cristobal, and the mixed transportation systems on the Orinoco and Apure Rivers and their tributaries.

The concessionaire binds itself to establish and maintain a steamer service on the upper Orinoco and the Rio Negro and their tributaries from the frontiers, with Brazil and Colombia, as far as the region of the great rapids of the Orinoco known as the Maipures and Atures.

This contract also gives the company the privilege of developing water powers, constructing railways, and extending their steamboat service in the Guiana country and over all the navigable rivers of Venezuela not already supplied with service; to establish cattle ranches; it agrees to bring in colonists numbering 2,000 families or more within six years; it has the right to establish telephone, telegraph, and wireless telegraph lines and stations in the Amazon territory; the privilege of exploitation of all natural products in the Amazon Federal territory; and the preference of title to all mineral discoveries. The natural products include rubber and balata, tonka beans, and valuable woods.

The concessionaire agrees to pay an annual subsidy of 25,000 bolivares, which sum shall be used in the promotion of public instruction in the districts covered in the concession. In addition there shall be established four schools at convenient points, and the company shall contribute 400 bolivares annually to each school, this sum to be distributed as prizes to the best students.

Throughout the life of the contract the company shall be exempt from the payment of national taxes, but during the first five years it shall pay the Government 100,000 bolivares per year; 125,000 bolivares annually during the next five years, and 1,000,000 bolivares per year until the termination of the contract. The concessionaire shall have the right to import free of customs duties all materials for railroads, houses, warehouses, etc., necessary for the fulfillment of the contract, while the Government shall be entitled to a discount of 50 per cent on transportation of cargo, passengers, and mail.

REVIEW OF THE CENTENNIAL CELEBRATION.

The work of compiling and editing the various documents and papers, descriptive of and pertaining to the recent celebrations of the one hundredth anniversary of the independence of Venezuela, has been intrusted to Sr. Delfin A. Aguilera and Sr. Manuel Landaeta Rosales.

IMPORTANT DEVELOPMENT IN VENEZUELA.

According to a report from Isaac A. Manning, the United States consul at La Guaira, the contract between the Venezuelan Government and Gen. R. Delgado Chalbaud for Orinoco River transportation and other development in Venezuela has been recently approved by the Venezuelan Congress. An offer of two-fifths in cash and three-fifths in stock ($1,459,950 and $2,189,925) by a foreign syndicate was recently refused by the concessionaire. An opportunity has, however, been given those who were complaining of features of the contract to get stock in the company by opening subscriptions in Caracas. In case no adequate amount of capital is thus secured it is considered not improbable that the contract holder may seek to enlist aid from abroad, possibly from the United States.

Press dispatches from Caracas under date of August 10, stated:

> The Government yesterday signed an important concession providing for the installation in Caracas of an extensive water supply and a sanitary and sewerage system and for paving the city.
>
> Gen. Ramon Delgado Chalbaud, commander general of the navy, sailed yesterday for London to negotiate the sale of the concession to an English syndicate.
>
> He also will sell a new bank concession and treat for a transfer to English capitalists of the great ten million dollar navigation monopoly recently granted to a Venezuelan corporation, which gets for 50 years the privilege of navigating all rivers and lakes in the Republic and the exploitation and colonization of the entire Amazon territory. Preference was given the company as regards mining claims and the rubber industry. A salt monopoly also was granted for a period of five years.

COTTON MILL FOR MARACAIBO.

The city of Maracaibo has recently entered into a contract with a local company for the erection and operation of a cotton mill, according to an advice from Ralph J. Totten, the United States consul at that point.

The main points of the contract, as published in the official gazette of the State of Zulia, are as follows:

> The company agrees:
>
> (1) To erect suitable buildings for a cotton mill and to install all machinery necessary for the manufacture of cotton yarns and cloths, for the ginning of raw cotton, and for extracting the oil from the cotton seed.
>
> (2) To commence operations within 18 months from the date of the contract, July 21, 1911.
>
> (3) To pay annually to the city of Maracaibo 480 bolivars ($92.64) during the first 10 years and 100 bolivars ($19.30) monthly during the remainder of the term of the

contract; the contract to be binding for 25 years, with the privilege of renewal for 25 years at the pleasure of the contracting parties.

The city agrees:

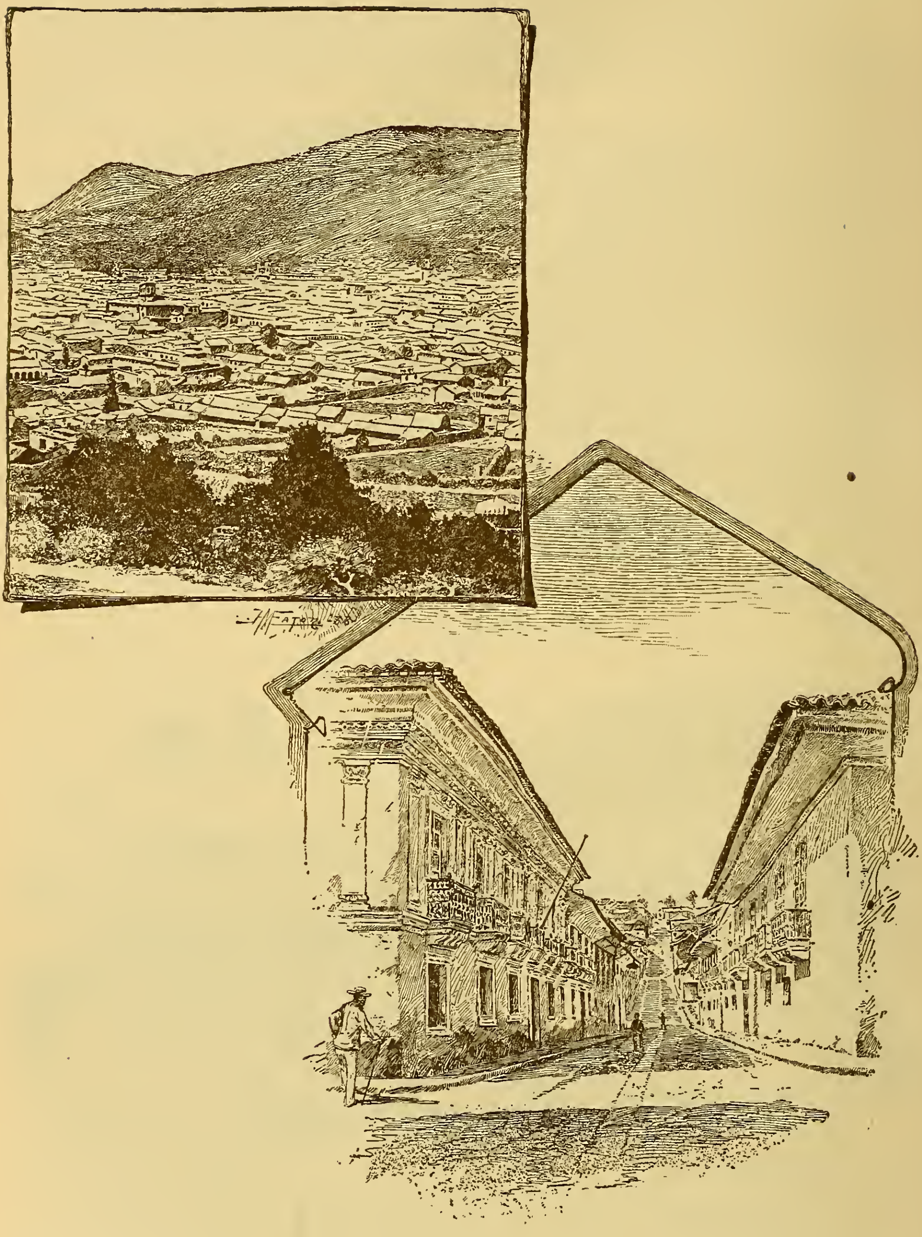
(1) Not to impose any other tax or impost on the enterprise and not to permit the installation of any other cotton mill during the first 10 years of the term of contract. This, however, is not to interfere with the operation of any cotton gins or oil presses now in the city.

(2) To solicit from the National Government free entry through the customhouse of all machinery and supplies necessary for successful operation of the plant.

The company has the right to sell the plant to any individual or company, local or foreign, without further permission, the purchaser of course being bound by the terms of this contract. The plant can not be sold to any foreign government nor shall it be used as basis for any claim against the National or State Governments.

The purpose of the company, as stated by one of the officials, is to manufacture coarse counts cotton yarns and low and medium grade gray drills and sheetings. If the enterprise should be successful, and owing to the high duties on cotton cloths there seems to be every chance that it will be so, it is the intention to go into the manufacture of better-grade cloths and possibly woolens.

The customs duties of cotton cloths range from 14.5 cents per 2.2 pounds on the cheapest grades of ducks and sacking up to 96.5 cents per 2.2 pounds on fine fancies. All duty is figured on gross weight, and all pay 56.5 per cent of duty as a surtax.



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BULLETIN
OF THE PAN AMERICAN UNION

VOL. XXXIII OCTOBER, 1911 NO. 4

IN view of their reference to Pan American conditions, the Panama Canal, and to other matters affecting the relations of North and South America, there are quoted below some editorials from far western papers in regard to the recent official visit of the Director General to that section.

The San Diego (California) Union, of July 25, 1911, under the head of "Taft did well by San Diego," says:

> In almost every incident relating to last week's exposition ground breaking and celebration San Diego was peculiarly fortunate, but in none was this city more notably favored than in the presence of Hon. John Barrett. His coming was not only a potent factor in the success of the four-day pageant, but should make powerfully for the success of the exposition itself. President Taft could not have selected as his representative a man better qualified to act in that capacity during the ceremonies and festivities in this city. And there is no reason to doubt that when the choice fell upon Mr. Barrett, the President had in mind the peculiar fitness of that gentleman.
>
> The exposition to be held in San Diego in 1915 will not be what is known as a world's fair. The latter was not contemplated even when it was supposed that the chief canal celebration of the Pacific coast would be in this city. The plan contemplates an exposition whose features shall be original and shall attract by their unique beauty. It is hoped that countries bordering the Pacific Ocean, especially Republics of Spanish America, will deem it to their advantage to exhibit. It is not doubted that those Republics, on a proper presentation of the matter, will take that action. This view has been encouraged by the fact that Brazil, on the Atlantic side, has already indicated a wish to exhibit here on an elaborate scale. In these conditions it is not difficult to believe that President Taft in selecting a representative made choice of Mr. Barrett because of his profound knowledge of Spanish America and his ability thereby to render a great practical service to the San Diego exposition, if it should be deemed worthy. But whatever the President's motives may have been, the fact remains that he sent to San Diego a representative who may be truthfully said to have been an inspiration to this city to go forward with its plans with redoubled confidence.
>
> Because of the conspicuous part which for years Mr. Barrett has taken in the work of the International Union of American Republics—the "Pan American Union"—and because of the frequent missions on which he has been sent to Spanish America, he has, perhaps, more influence with the southern Republics than any other citizen of the United States. He knows them thoroughly, and they have the utmost confidence in him. It follows that to have impressed Mr. Barrett favorably in regard to San Diego's exposition plans should be a great gain for this city.

Fortunately there is every reason to believe that a very favorable impression was made upon the President's representative. The habitual reserve of the diplomat did not prevent him from speaking words that left no doubt that what he beheld during his four days in San Diego had convinced him that this city has the will and ability to hold a successful exposition in 1915, and that the project merits sympathy and support.

San Diego will remember with lively gratitude President Taft's action in sending John Barrett to this city. Nothing that the President could have done on his own initiative could have given greater aid to the exposition project.

The San Francisco (California) Call, of July 24, 1911, under the head of "Mr. Barrett's words," says:

The ceremonial observance of ground breaking for the San Diego exposition in 1915 is an event of State and national significance. The whole Commonwealth of California is impressively represented at the celebration, and the President of the United States, on behalf of the Nation, sent his personal representative, that distinguished diplomat and authority on international affairs, Mr. John Barrett, Director General of the Pan American Union, who has made a special study of the potentialities that must be created by the opening of the Panama Canal.

San Diego, like San Francisco, by reason of location and natural harbor advantages, occupies a most favorable position as a factor in the development of the trade and industrial progress that must grow out of the union of Atlantic and Pacific by means of the Panama waterway. As Mr. Barrett said:

"I prophesy with no fear of successful contradiction that during the next 10 years the whole western section of the United States will rub its eyes, and on awakening to the value of the trade of that part of the world wonder why it did not heed earlier my appeals and urgings. For years I have been trying to make this coast and its commercial organizations realize the potentialities of the 12 Pacific countries of Latin America, not to speak of those bordering on the Caribbean and the Atlantic Ocean, but you have been so enamored of the Orient and Alaska that my efforts have been largely in vain. Now I see the dawn of a new day, and the light that comes up will be gloriously reflected by the Panama-California Exposition at San Diego in 1915.

"On an incomparable land-locked, deep-water harbor, the first United States port north of the canal, well within the great circle which reaches from Panama to the Orient, at the beginning of a coast line which extends for 8,000 miles south from San Diego to Punta Arenas, it is indeed a first scene for one of the great expositions which will celebrate the opening of the Panama Canal and the inauguration of a new era of commerce, peace, and prosperity among all the nations bordering upon the Pacific seas."

All this is true. In fact, the San Diego celebration comes as a timely reminder that the mercantile and manufacturing communities of California should wake up to the new commercial conditions that will be created by the opening of the Panama Canal. Water connection between the Atlantic and the Pacific means a commercial revolution, for which our people should prepare themselves in time.

It is not so long now until the canal will be ready for use. It may be expected that the year 1914 will see merchant ships on their way through the isthmus. San Francisco and San Diego are united in making preparation to celebrate the event, and it is fitting that its importance should be signalized by high ceremonial observance.

The Los Angeles (California) Herald, of July 26, 1911, under the head of "Hurry at the harbor," says:

One billion dollars annually is Director General John Barrett's estimate of the amount of trade which the 12 Latin American countries which debouch upon the

Photograph by Harris-Ewing.

VICE ADMIRAL LUIS A. GOÑI, OF CHILE.

Vice Admiral Goñi, who is at the head of the Chilean Naval Commission in London, holds the distinction of being the second ranking officer in the Navy of Chile. As the distinguished guest of the United States, the admiral and his party spent several weeks during October inspecting the leading naval stations in this country, and visiting the many points of interest. It is a pleasure to note the cordial reception and entertainment which the Admiral received at the various points visited, and to acknowledge the courteous visit of the Admiral to the Pan American Union.

Pacific Ocean will transact when the Panama Canal is completed. He believes that Los Angeles and California should gain a large share of that foreign commerce. But he points out to us that we are unprepared to take care of it. If we expect to reap these commercial benefits we must immediately get busy. To an audience of Los Angeles business men he said:

"I now most respectfully and earnestly urge upon your chamber of commerce and your business interests to adopt resolutions and take such other steps as to develop a real preparedness for the canal * * * ."

This is sound advice and should be acted upon. Los Angeles has been so intent upon bringing the Owens River water here by aqueduct that we have scarcely turned attention to the immense work which awaits us in opening and enlarging our harbor.

No time must be lost in beginning the dredging job at Wilmington. If the bids of private companies are exorbitantly high, as the board of public works thinks they are, then the city would better buy its own dredger and do the job by day work.

The Oakland (California) Tribune, of July 30, 1911, under the head of "The path to commercial empire," says:

* * * * * * *

Mr. Barrett's address at the chamber of commerce luncheon was both illuminating and eloquent. He has the power of stirring the imagination, of vivifying cold facts and presenting separated but correlated conditions and realities as a concrete illustration of present and future potentialities. His mission out here is to urge upon the commercial bodies of the Pacific coast the necessity for being fully prepared for the opening of the Panama Canal. Unless we are fully prepared for that great event we can not realize the advantages which we should realize and which will be ours if we only grasp the opportunities offered us. But grasping these opportunities involves concerted and intelligent effort. We must ascertain what is to be done and how it is to be done and then do it.

* * * * * * *

In nothing that he said was Mr. Barrett so instructive and persuasive as in his recapitulation of the volume and potentialities of the trade of Central and Southern America. It has long been our opinion that it is to the south rather than to the east that we should look for trade expansion. Mr. Barrett's statement confirms that view. He did not say that in so many words, but a study of his remarks leads to no other conclusion. The people of the Latin American Republics are our neighbors; they are inhabitants of this hemisphere and linked to us by the common tie of political aspiration, and their material interest in the Panama Canal is hardly second to our own. The foreign trade of the 70,000,000 of Latin Americans is fivefold greater than the foreign trade of China and Japan combined. In other words, the trade of 400,000,000 orientals is not worth one-fifth the trade of 70,000,000 Latin Americans. The trade of Argentina alone is worth more than $700,000,000 a year, and the capital of Argentina is one of the great commercial ports of the world. It is the largest and most enterprising Spanish-speaking city on the globe and is the metropolis of a vast and fertile region equal in extent to all the territory comprised within the limits of the United States prior to the Louisiana purchase. Then there is the mighty domain of Brazil, and Chile, Peru, Ecuador, Bolivia, Uruguay, and Venezuela—all waiting for closer commercial union with the people of this country. Argentina, Chile, and Brazil are among the most progressive nations of the earth. It is with them we should cultivate closer trade relations; it is their commerce and friendship we should seek.

It has long been the habit in the United States to disparage our Latin American neighbors, to deride their government, and sneer at their civilization. We have sent filibusters a plenty among them, but few traders and intelligent travelers. We are to a large extent still incrusted with the insular conceit our forefathers brought from the British Isles, a conceit that has caused us to look with contempt upon all who speak the Spanish language and who follow customs different from our own. Therefore we have estranged people who should be our friends and neglected a field of trade lying at our very doors that is worth many times what the Orient can yield. Moreover, our eyes have been dazzled by a mirage which has held mankind in thrall since the days of Marco Polo. Our ideas of the east are largely drawn from the Arabian Nights and the fables of medieval travelers. We are still under the glamor of tradition and the golden dreams which led Alexander across the desert sands to the banks of the Indus. We have kept our eyes fixed on the east when we should have turned them to the south—to the south where the peace of this hemisphere should be cemented and an accord established which will forever secure this quarter of the globe freedom from invasion and a commercial intercourse based upon mutual friendship and mutual advantage that will inure to the development of a higher and a nobler civilization.

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The Oregon Daily Journal, of Portland, Oregon, August 4, 1911, under the head of "Mr. Barrett's message," says:

Mr. Barrett brought a message to Portland. It is a message that vitally concerns the people of this city.

His position as Director General of the Pan American Union gives him inside knowledge of what the world thinks about the canal, the scope of its influence, and the possibilities of its influence upon world commerce. It gives him complete and first-hand knowledge of the vast trade, present and yet to be developed, of South American nations, and of the bearing the canal may have in giving the Pacific ports a strong hand in the future of that trade.

No other man has so good opportunity to gauge the situation in all its relations and ramifications. Through 18 years of public life he has been officially and enthusiastically a student of the trade of the Orient and South America and the relation of the United States thereto. His diplomatic service was in the very field that equipped him best with knowledge of what the canal is to mean. His wide knowledge and his present position bring him into the closest relation with the great engineer who is building the canal. He knows in dollars and tons the present figures of the world trade to be affected, and is in position to authentically state with what ought to be almost unerring accuracy the possibilities of the great waterway.

In the midst of such a relation, Mr. Barrett is in Portland appealing to the commercial organizations and to the citizenship of this city to prepare for the new era of commercial activity that will be inaugurated by the canal. He tells of the new inquiries already pouring into the headquarters of the Pan American Union from many of the ports of the world about the United States ports on the Pacific, Portland among them. Steamship owners and transportation magnates in all ports of the world are seeking information, asking about Portland's water terminals, harbor facilities, means of access and trade possibilities, and are, of course, planning to come here, if there is room, accommodations, and business for the big 10,000-ton steamships that are to be the new standards of the merchant fleets of the world in the era of the Panama Canal.

Mr. Barrett's appeal is a living and militant confirmation of the facts this newspaper has urged for years with reference to Panama. His urgent suggestion for action at home and movement for legislation at Washington are themes of vital importance to Portland, Oregon, and the Northwest. They constitute a message of great value to the militant men of this city and reflect much credit upon Mr. Barrett.

The Tacoma (Washington) Ledger, of August 7, 1911, under the head of "John Barrett," says:

"Get ready for the Panama Canal," is the advice of John Barrett, executive officer of the Pan American Union, who is to address the Tacoma Commercial Club and

Photograph by Harris-Ewing.

HONORABLE H. PERCIVAL DODGE.

Envoy Extraordinary and Minister Plenipotentiary of the United States to Panama.

Chamber of Commerce this week. Mr. Barrett, who was formerly a newspaper man of Tacoma, has made a special study in recent years of the Spanish American Republics, and it is probable that no man living knows more of the subject than he. He is a diplomat and a commercial expert at the same time. He is also an enthusiast, which makes for the success of the work he is leading.

He regards the present as the psychological moment to discuss with the Pacific Northwest what must be done to get ready for the Panama Canal. Only a few days ago the Interstate Commerce Commission rendered a decision in the Spokane rate case that is pretty sure to increase the amount of freight received in coast cities by water. The opening of the canal will reduce greatly the time required for a shipload of freight to move from the Atlantic to the Pacific, and if Spokane and other inland western cities gain by the recent railroad-rate decision, whatever advantages we may temporarily lose will be more than regained with the opening of the canal.

But we should be making preparations, Mr. Barrett thinks, so as to reap the advantages from the start. Especially well urged is his advice that Congress legislate promptly on the government of the canal so that the shipping world may know exactly what are the conditions that must be met. Particularly it should be known what will be the tonnage charges. From $1 to $1.50 a net ton has been suggested. By knowing beforehand what the charges will be, steamship men can build vessels and plan routes in advance and be ready with the opening of the canal to make large use of it.

Mr. Barrett is visiting a number of Pacific coast cities discussing Panama Canal and urging closer commercial relations with South American Republics, particularly the Republics on the west coast. The opportunity to hear a man so well informed on a vital commercial question is appreciated by Tacoma, which will take pleasure also in welcoming a former citizen.

LECTURES AND BOOK BY MR. SANTAMARINA.

Mr. J. P. Santamarina, a prominent civil engineer, newspaper writer, scholar, and lecturer of Argentina, has returned to the United States for another visit and will present a series of public lectures on the Argentine Republic which should do much toward awakening greater interest throughout the United States in that progressive country. Mr. Santamarina has prepared this lecture especially for delivery before universities, colleges, and technological schools, and he makes it all the more interesting by the liberal use of appropriate illustrations and reproductions from best engravings and maps. Among the subdivisions of his lecture are the following: "The history of the Argentine Republic;" "The declaration of independence;" "The new political period;" "The city of Buenos Aires;" "The sociability of the country," including a description of its clubs, etc.; "The suburbs of Buenos Aires;" "The intellectuality of the country," embracing a statement on its public schools, churches, theaters, etc.; "The principal interior cities;" "The shipping connections and the commerce of the country."

The Pan American Union is also gratified to know that Mr. Santamarina is about to bring out a new book on trade with the Argentine Republic. This will contain a vast amount of material which should be in the hands of every firm that wishes to transact business with Argentina. There is probably no man to-day who is more familiar with the exact conditions of trade exchange between the United States and the Argentine Republic than is Mr. Santamarina. His discussions before the Pan American Commercial Conference, which was held under the auspices of the Pan American Union last February, demonstrated his familiarity with this subject. The Pan American Union has much pleasure in recommending Mr. Santamarina to educational institutions and commercial and civic organizations as an authority who can deliver most interesting addresses.

THE UNITED STATES MINISTER TO PANAMA.

H. Percival Dodge, the newly accredited envoy extraordinary and minister plenipotentiary to Panama, was born in Boston, Massachusetts, January 18, 1870. He attended the schools of his native city and graduated from Harvard University in 1892 and from the Harvard Law School in 1895. He was admitted to the bar of Suffolk County, Massachusetts, the year of his graduation and for two years enjoyed an active practice. In 1897 he pursued some special studies abroad, principally in France, Germany, and Italy. On February 16, 1899, he entered the diplomatic service of the United States as third secretary of the embassy at Berlin, and within the next few years was promoted to secretary of the embassy. After four years at this post Mr. Dodge was transferred to secretary of the embassy at Tokyo, and the following year was promoted to the position of envoy extraordinary and minister plenipotentiary to Honduras and Salvador. On July 1, 1908, he was appointed envoy extraordinary and minister plenipotentiary to Salvador and was transferred to Morocco the following year. In 1910 Mr. Dodge assumed the position of Resident Diplomatic Officer and Chief of the Division of Latin-American Affairs, Department of State, at Washington, which post he occupied until his appointment as minister to Panama to succeed Thomas C. Dawson, who now becomes the Resident Diplomatic Officer at Washington.

NEW ORLEANS AND THE PANAMA CANAL.

The New Orleans Progressive Union, one of the most energetic and powerful commercial organizations of the country, has petitioned the Secretary of War of the United States that New Orleans shall have the privilege of sending the first merchant vessel through the Panama Canal when it is opened for operation. Among those who have expressed their approval of this idea is ex-President Theodore Roosevelt, who says:

> It seems to me that it would be peculiarly appropriate to have a ship of the New Orleans Progressive Union first to go through the canal. * * * I think that as San Francisco got the fair, New Orleans should have the honor of putting the first ship through the canal.

A most appropriate and complimentary indorsement is one which was directed to the New Orleans Progressive Union by Hon. Charles C. Moore, president of the Panama-Pacific International Exposition, in which he says:

> It having come to the attention of the Panama-Pacific International Exposition that New Orleans desires to put the first American merchant ship through the Panama Canal, we wish to extend to you assurances of our earnest desire to help you in this most laudable ambition. If you will inform us how you think we can best aid you, we will immediately and enthusiastically enter upon the campaign to secure for New Orleans, the gateway to the Mississippi Valley, this great commercial privilege, which it so richly deserves.

In view of the interest which surrounds an effort of this kind, the Bulletin has pleasure in quoting the following letter of Mr. L. E. Bentley, chairman committee on immigration, steamship, and rail service of New Orleans, addressed to Hon. H. L. Stimson, Secretary of War:

> SIR: There has been organized in New Orleans, within the past few weeks, what is known as the Mississippi Valley, South America & Orient Steamship Co., or, for brevity, the Pan American Mail. This is a $3,000,000 corporation, which will operate American ships to South America, and, when the Panama Canal is opened, to the west side of Latin America and the Orient.
>
> The company is backed by capitalists principally of New Orleans and St. Louis, and while it will begin operations at once with chartered ships of other nations for the purpose of taking care of the overwhelming offers of tonnage presented by the manufacturers and jobbers of the Mississippi Valley, the real purpose is to build and operate American ships of the highest class for both passengers and freight. This company was chartered, following a constitutional amendment voted by the people of the State of Louisiana, exempting the effort (when American ships are used) from taxation for a period of 15 years. In this respect Louisiana has taken the most advanced step of any State of the Union for the rehabilitation of the American merchant marine.
>
> Our commissioners have visited Brazil, where arrangements have been made for all proper and necessary concessions and facilities at that end of the line. Commissioners of the Brazilian Government have in turn visited New Orleans and affirmed these arrangements, and our representatives are now again on their way to Brazil to perfect details. The principal object of the line is to make practical and effective use of the Panama Canal by American citizens, ships, and commodities, and our object in addressing you is to make formal application, in behalf of this company, for the right and privilege of sending the first American merchant ship through the Panama Canal, when it shall have been opened.
>
> We feel that the enterprise and foresight of the people of Louisiana in thus inaugurating the reestablishment of the American merchant marine by this tax exemption, and the enterprise of the people of the Mississippi Valley who are behind this movement, entitles them to first consideration in what they esteem to be a great privilege and honor. We feel that this is a step in the right direction and which, from a practical standpoint, will give an object lesson to the rest of the country as to how the Panama Canal must be used to be of greatest benefit to the American people.
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> We, therefore, respectfully urge and request that this petition be granted the company, which is not so much a private enterprise, as it is the expression of a great patriotic public movement in the interests of the entire country.

Photograph by Harris-Ewing.

HONORABLE JAMES T. DU BOIS.

Envoy Extraordinary and Minister Plenipotentiary of the United States to Colombia.

In response to a request from Hon. James W. Porch, president of the New Orleans Progressive Union, for his opinion, the Director General of the Pan American Union has replied as follows:

Upon my return from an extended official trip to the Pacific coast and far West, I find your esteemed note of July 29, in regard to the petition addressed by the New Orleans Progressive Union to the Secretary of War of the United States, requesting that New Orleans have the honor and privilege of sending the first merchant vessel through the Panama Canal when it is ready for operation.

Without hesitation I can say that I believe that this ambition on the part of your organization and your city is a most laudable one and deserving of careful consideration by the authorities who will determine the details of the opening of that mighty waterway.

There are two reasons, above all others, which appear to me as strong arguments for the consummation of your contention. The first is that no other city and port in the United States has more direct concern with the opening of the Panama Canal and no other city will have more direct commercial relationship with the countries reached through the canal than New Orleans. Its location as the principal southern commercial metropolis of this country, situated on the Gulf of Mexico and at the mouth of the Mississippi River, forever settles its position of vital interest in everything connected with the canal. The second consideration is the remarkable and almost unprecedented enterprise and interest which has been shown by the State of Louisiana in exempting from taxation any American steamship line operating out of Louisiana to foreign countries, a step which is a most practical one for the rehabilitation of the American merchant marine and for the actual utilization of the Panama Canal.

The great point in connection with the Panama Canal which I am now urging in my official position upon the various States, cities, commercial organizations, and individual business firms in the United States is that they must make their motto from now on until that waterway is completed, "Get ready for the Panama Canal." I am, therefore, delighted to see that New Orleans is setting a splendid example in this direction, for it will surely reap enormous benefits by preparations of such character as that of organizing steamship companies to carry on business through the canal.

Remembering how it was my pleasure, when I visited New Orleans as the guest of the Progressive Union about a year and a half ago, to urge upon your business men the taking of every step possible for the actual preparation for the canal, I now congratulate you on what you have done and assure you that you can count upon every cooperation consistent with my position.

THE UNITED STATES MINISTER TO COLOMBIA.

The newly appointed envoy extraordinary and minister plenipotentiary of the United States to Colombia is James T. DuBois, who has been promoted from the position of consul general at Singapore to his present post. Mr. DuBois was born in Hallstead, Pennsylvania, April 17, 1851, and still maintains his legal residence at that point. He received his elementary education in the public schools and at Ithaca (New York) Academy, after which he attended Cornell University and the Columbian University Law School. On leaving the law school he became editor of the National Republican, at Washington, D. C., remaining in this position until 1877. Mr. DuBois then engaged in various industrial enterprises, but left the business field to enter the consular service of the United States. His first appointment was that of commercial agent at Aix la Chapelle, November 2, 1877, of which post he was made consul in 1880. In 1883 he was transferred to the consulate at Callao, Peru, and later in that year to Leipzig. Mr. DuBois resigned from the consular service in 1886, and after a lapse of nearly 10 years again entered the service, this time as consul general to St. Gall. On July 6, 1901, he was made law clerk in the Department of State, and in 1909 was again accredited to the consular department as consul general to Singapore. This important post he was occupying at the time of his appointment as minister to Colombia.

MINISTER MORGAN'S DEPARTURE FROM MONTEVIDEO.

The Government and people of Uruguay gave Hon. Edwin V. Morgan, late United States minister to that country, and recently transferred to Lisbon, Portugal, a godspeed when he left which showed beyond question how highly esteemed he was in his South American post. Very few United States ministers have left a country after extended service with such general expression of regret on the part of those he was leaving behind. Not only the Government and diplomatic officials, but a thousand or more students, professors, and school children saw him off on the steamer. The president of the Student's Federation addressed him on the deck of the vessel, and large numbers, including the local branch of the Young Men's Christian Association and the students of the American schools, attended in launches to the outer roads. Minister Morgan touched the youth of Uruguay through his interest in both primary and higher education and his sympathy with the students' movement which was directed toward raising the prestige as a national hero of Gen. José Artigas, the founder of the Uruguayan nation. As the *Araguaya*, of the Royal Mail Line, on which Mr. Morgan was a passenger left the harbor, the ships in port saluted and their bands played the national air of the United States, while all the river boats and tugs blew whistles and military bands played at several points. The Pan American Union takes advantage of this opportunity to extend its congratulations to Minister Morgan upon the skill with which he served the United States Government at Montevideo and the good work that he did in cementing closer relations between the United States and Uruguay.

A PAMPHLET BY MR. CONANT.

Among the interesting publications of the American Academy of Political and Social Science is No. 631, entitled "The way to attain and maintain monetary reform in Latin America." The paper is written by the well-known authority on financial matters, Mr. Charles A. Conant, former commissioner on the coinage of the Philippine Islands, who is a prolific writer on subjects of this character. We recommend that all persons who are interested in monetary conditions of Latin America read this brochure.

OPINION OF THE EDITORIAL REVIEW.

D. Havelock Fisher, in the Editorial Review, makes the following reference to the book recently published by the Director General of the Pan American Union. This is one of many of a similar character which have been received at this institution, and is quoted below:

> A handsome, illustrated volume, the Pan American Union—Peace, Friendship, Commerce—by John Barrett, Director General of the Union, has just been published. It is a valuable compendium of information upon the history and present conditions of the 20 Latin American Republics included in the union, as well as what they have done for peace and arbitration, a remarkable record not generally known or appreciated. As a handbook of the southern Republics and as a presentation of their progress and possibilities we highly commend this publication.

ONE HUNDRED YEARS OF PEACE.

Elaborate preparations are under way for the celebration in December, 1914, of the one hundredth anniversary of peace among English-speaking peoples. A general prospectus has recently been issued of the plan and purpose of the national committee for this celebration. The officers include as honorary chairman, Theodore Roosevelt; chairman, Andrew Carnegie; honorary vice chairmen, Elihu Root, Levi P. Morton, Adlai E. Stevenson, William Jennings Bryan, Alton B. Parker, and Joseph H. Choate. The secretary, who has active charge of the correspondence, is Mr. Andrew B. Humphrey, and the headquarters are at 50 Church Street, New York City. Mr. William B. Howland, chairman of the committee on international conference, is also the chairman of a special subcommittee on international organization, which was appointed for the purpose of conferring with the movement of organizing similar committees in Great Britain, Canada, and other English-speaking countries.

A NEW BANK IN THE DOMINICAN REPUBLIC.

In a letter which has recently been received from Frederic Brown, he informs the Pan American Union of the organization of the National Bank of Santo Domingo. It will operate as a Dominican corporation under the banking laws of that Republic without any special privileges, as the law itself is sufficiently broad to favor such operations. The bank is one of issue and discount. The capital at present is $500,000,

Photograph by Harris-Ewing.

SEÑOR DON ALBERTO YOACHAM.

Señor Yoacham, for some time Chargé d'Affaires of Chile at Washington, recently left for his native country. It is quite probable that Señor Yoacham will be honored by his Government with an appointment to the position of minister in the diplomatic service of Chile.

though the permit granted by the Government authorizes an increase up to $2,000,000. Mr. Brown reports that there is enthusiasm over the project on the part of the commercial and industrial elements of the whole Republic and many Dominicans are expressing a desire to participate as shareholders. Mr. Brown has been working on this proposition for over a year and has had the hearty cooperation of Mr. Samuel M. Jarvis, of the National Bank of Cuba. The bank will occupy a rented building at first until it can build a special structure later on.

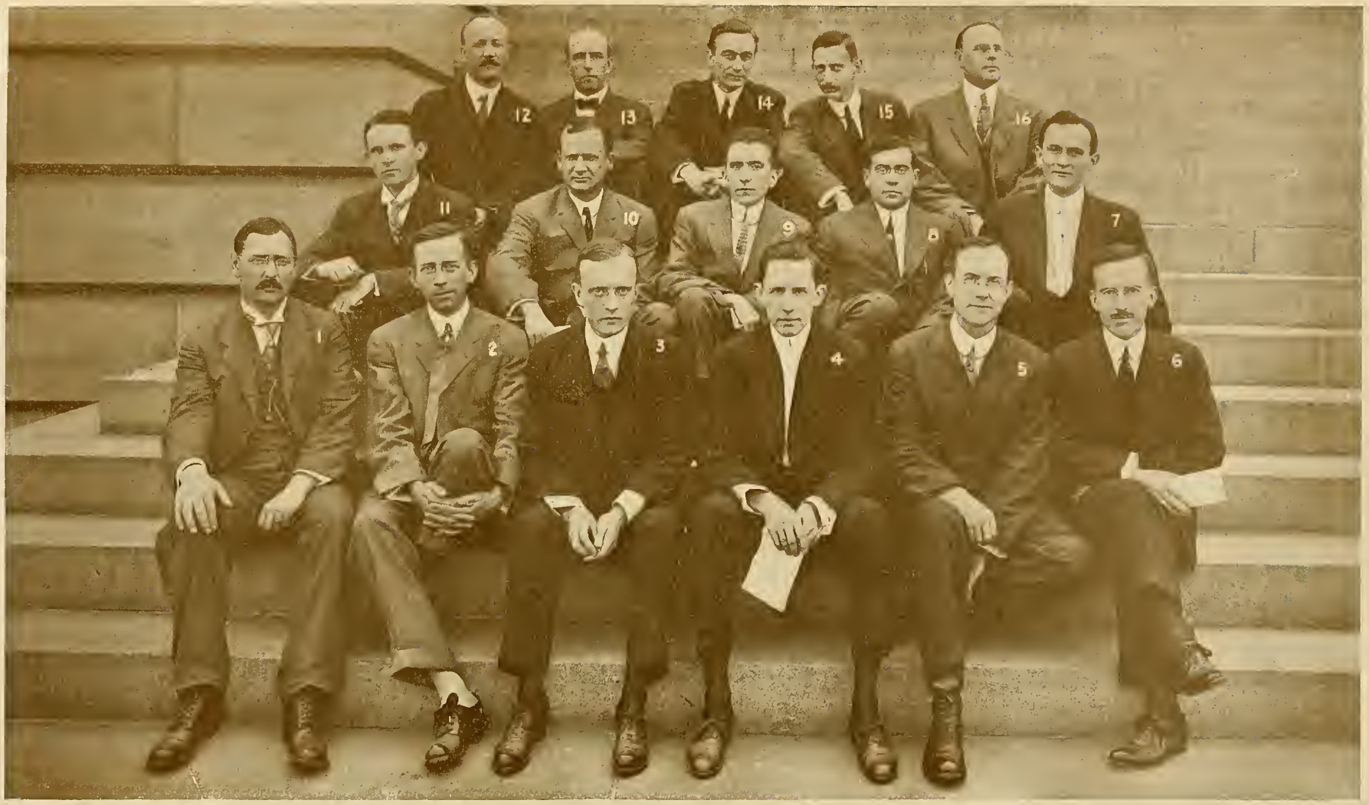
ADDRESS BY TRACY ROBINSON.

We have before us an interesting little pamphlet, which contains an address entitled, "A great adventure and its results in tropical America," delivered by Tracy Robinson at Cristobal, Canal Zone, Panama, on July 12, 1911. It is well worth reading as showing what has been accomplished by the United States in tropical civilization.

THE HANDBOOK OF MEXICO.

The new Handbook of Mexico, which was compiled by this institution and made its appearance in July last, has been most favorably received everywhere, not alone in official circles but also by the commercial and private interests who are interested in the economic and social development of this progressive country. The work of preparing this valuable compendium of information consumed many months, and every effort was put forward to render this compilation one of interest, attraction, and authenticity. That this purpose was in a large measure attained is evidenced by the numerous complimentary letters which are received at this office, by the continuous requests for this publication, and by the extensive reviews devoted to this book in the press of both the United States and Latin America. The Bulletin has especial pleasure in quoting the following comment from the Boston Evening Transcript of August 30, 1911, because of the high standing which this periodical occupies in newspaper circles:

> This Handbook of Mexico has been prepared by the Pan American Union to meet the great demand for comprehensive and specific data regarding Mexico. It endeavors to give those facts concerning geography, configuration, climate, agriculture, mineral and timber resources, history, public institutions, army and navy, exports and imports, railways, posts and telegraphs, finance, political divisions, cities, people, and other important features which are desired by persons intending to study Mexico, travel within its limits, make investments, or engage in export and import trade between it and other countries. Every effort has been taken to secure accuracy, though errors may have crept in through mistakes appearing in the original sources of information. These are believed to be very few, but some are necessarily unavoidable in a review of this extent and character.



Photograph by Harris-Ewing.

HON. HERBERT C. HENGSTLER (4), CHIEF OF THE CONSULAR BUREAU OF THE UNITED STATES, AND A GROUP OF CONSULAR OFFICERS AT THE CONSULAR SCHOOL, SEPTEMBER, 1911.

Under a provision of a special law, consular officers are required to attend the consular school, which is maintained by the Department of State, for a period of 30 days before departing to their respective posts. Reading from left are: (1) Thomas W. Voetter, of New Mexico, Consul at La Guaira, Venezuela; (2) George F. Davis, of Missouri, Consul at Ceiba, Honduras; (3) Clarence E. Gauss, of Connecticut, Consular Bureau, Department of State; (4) Hon. Herbert C. Hengstler, of Ohio, Chief of the Consular Bureau; (5) Charles Hathaway, of Pennsylvania, Consul at Puerto Plata, Dominican Republic; (6) DeWitt C. Poole, jr., of Illinois, Consular Assistant; (7) Theodore C. Hamm, of Virginia, Consul at Durango, Mexico; (8) Charles H. Albrecht, of Pennsylvania, Consular Assistant; (9) Herbert C. Biar, of Indiana, Consular Assistant; (10) Emil Sauer, of Texas, Consul at Bagdad, Turkey; (11) Bernard Manning, of South Carolina, Consular Assistant; (12) Homer Brett, of Mississippi, Consul at Maskat, Oman; (13) Graham Kemper, of Kentucky, Consul at Cartagena, Colombia; (14) Walter H. Schulz, of Oklahoma, Consul at Aden, Arabia; (15) Robert T. Crane, of Maryland, Consul at Rosario, Argentine Republic; (16) Frederick T. F. Dumont, of Pennsylvania, Consul at Guadeloupe, West Indies.

The map of Mexico, while not an official publication, is practical and useful for this work. Mexico is so large and is making such progress that it is manifestly impossible to do justice to every feature of its growth and its development, but it is believed that a handbook of this character will be welcomed by all persons interested in that remarkable country.

STUDY OF SPANISH IN THE PUBLIC SCHOOLS.

Referring to the efforts of the Pan American Union to awaken interest in the study of Spanish among the public schools of the United States, it is a pleasure to quote from a letter which this office has recently received from Mr. Harry K. Wolcott, president of the Board of Trade and Business Men's Association of Norfolk, Virginia. He writes:

> As a result of the suggestion made at the Pan American Conference last spring, that Spanish be added to the course for students in the American public schools, I take pleasure in reporting that, through the efforts of our Board of Trade and Business Men's Association, that language has been added to the list taught in the Norfolk City High School.

THE LAUNCHING OF THE "RIVADAVIA" AND THE "MORENO"[1]

EVERY now and then some striking event focuses our attention on one or the other of the countries of our great sister continent to the south. The character of these events, during the last decade in particular, has been emphasized on account of their great constructive value, for they have furthered commercial and reciprocal relations between South America and the United States.

It is particularly interesting to note how importantly and frequently the navies have figured in these events as the bearers of great missions of peace and emissaries of brotherly good will: the escort and transport of Secretary of State Root on his ever-to-be-remembered tour, expressing our confidence and friendship; the voyage of "The Fleet," expressing our integrity and sincerity; and the recent voyage of the *Delaware* expressing our affection.

Among other South American naval vessels the beautiful Argentine frigate *Presidente Sarmiento* is an old friend in our leading Atlantic ports. And now the greatest fighting leviathans in the world have been successfully launched and are flying the flag of the pale-blue stripes and bursting sun. The eyes of the nations again turn toward South America and focus on Argentina. That she has intrusted to the United States the building of her first battleships, the two super-dreadnoughts *Rivadavia* and *Moreno*, not only bespeaks her confidence, but illustrates President Roque Saens Peña's statement when he said:

> I have the kindest feeling for the United States and will work not only to continue the present amicable and intercommercial relations but will strive to accentuate them.

It seems amply fitting that a Massachusetts man, Admiral Francis T. Bowles, should have competed successfully for this contract against the leading shipbuilders of the world and that the *Rivadavia* should be constructed in the State of Massachusetts, to add another link in that great chain of New England's maritime history and enterprise, while the *Moreno* should be built at the yards of the New York Shipbuilding Co., Camden, New Jersey.

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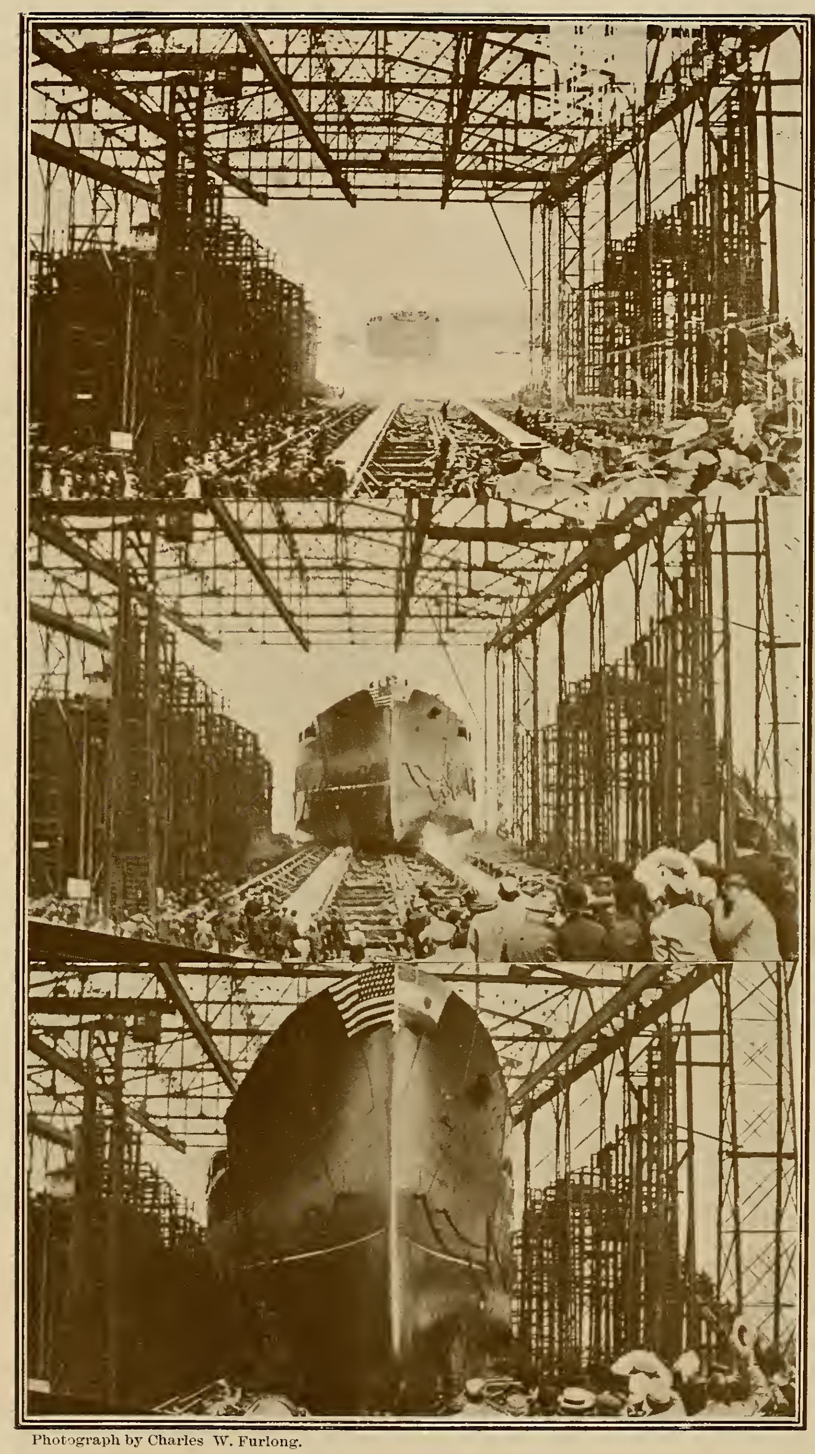
[1] By Charles Wellington Furlong, F. R. G. S.



Photograph by Charles W. Furlong.

THE LAUNCHING OF THE SHIP.

Scenes at the launching of the *Rivadavia*, at the yards of the Fore River Shipbuilding Co. Quincy, Mass., August 26 1911.

Rainy weather had preceded the day set for the launching of the *Rivadavia*, Saturday, August 26. That morning patches of blue sky opened up and the sun burst through the great white clouds as though nature herself had symbolically flung loose the Argentine colors. Long before the arrival of the special train which bore the prominent officials and many of the 1,000 special guests from Boston to within the Fore River yards, every available vantage point had been taken.

There, looking up from the surrounding landscape, the great red-painted hull of the *Rivadavia* majestically towered upward within the trestlework of cranes, like a huge dormant chrysalis in a cocoon of fine spun steel, soon to feel its first thrill of life. How wonderful that such a great unwieldy mass could be used and controlled by such pigmy creatures as those which gazed up at her in countless thousands.

AWAITING LAUNCHING OF THE *RIVADAVIA*.

A most gratifying indication of the increasing commercial relationship between the Argentine Republic and the United States is the construction of the *Rivadavia* and the *Moreno* for the Argentine Navy by United States shipbuilders. These are the first battleships of the dreadnought type to be built in the United States for a foreign nation.

When Admiral Bowles, president of the Fore River Shipbuilding Co., eventually turns over the *Rivadavia* and *Moreno* to the Argentine Republic they will have completed the biggest contract of its kind ever secured by an American shipbuilding company, and the

Argentine Government will pay for these two battleships about $22,000,000.

From the deck of the mammoth hull one looked down on a mass of expectant humanity; both banks of the river were dotted with little antlike humans which helped to swell the great concourse of over 50,000 people who had come to witness the greatest launching upon which human eyes had gazed.

Many invited guests were admitted to the yard, while some 900 privileged persons found their way to the launching stand, which was erected 25 feet from the ground about the bow of the *Rivadavia.* Even though this brought the people on a level with the roof of the great blacksmith shop, they still had to look upward 11 feet to the normal water line of the vessel.

DISTINGUISHED OFFICIALS AND GUESTS ON THE LAUNCHING PLATFORM OF THE *RIVADAVIA.*

Conspicuous on the launching stage, which was artistically draped with flags and bunting of the Argentine Republic and the United States, were Señor Dr. Romulo S. Naón, the Argentine Minister to the United States; Señora de Naón, wife of the minister, who christened the ship; Admiral Onofre Betbeder of the Argentine Navy, and family; Hon. Henry L. Janes, representing the Department of State of the United States; Admiral H. I. Cone, United States Navy; and other representative naval and governmental officials.

Far above on her port bow the pale-blue and white-banded flag of Argentina was united with the Stars and Stripes on the starboard side. Above them both the little naval jack of Argentina snapped in the light breeze, amidships were the flags of the United States and the Fore River Co., while a large Argentine national flag gracefully flaunted from the stern.

But the center of interest was the special stand at the very point of the upward bend of the great snubbed bow of the battle ship, which seemed to have already plowed its nose into the launching stage. Here all eyes were focused on the official party. With that easy grace and savoir faire so characteristic of our Argentine cousins the tall, distinguished figure of Dr. Romulo S. Naón, the Argentine minister to the United States, could be easily discerned, while Señora de Naón was representative of all the charm and beauty attributed to the women of Argentina. Upon her had been conferred the honor of christening the *Rivadavia* on behalf of Señora Rosa Saenz Peña, wife of the President of the Argentine Republic.

Beside Señora de Naón stood Admiral Bowles. The Hon. Henry L. Janes, Assistant Chief of the Bureau of Latin American Affairs, represented the Department of State; Rear Admiral Hutch I. Cone, Chief of the Naval Bureau of Steam Engineering, Rear Admiral Richard M. Watt, Chief of the Naval Bureau of Construction and Repair were also present, while the United States Army was represented by Col. F. D. Abbott.

SEÑORA DE NAÓN BREAKING BOTTLE ON BOW OF THE *RIVADAVIA*.

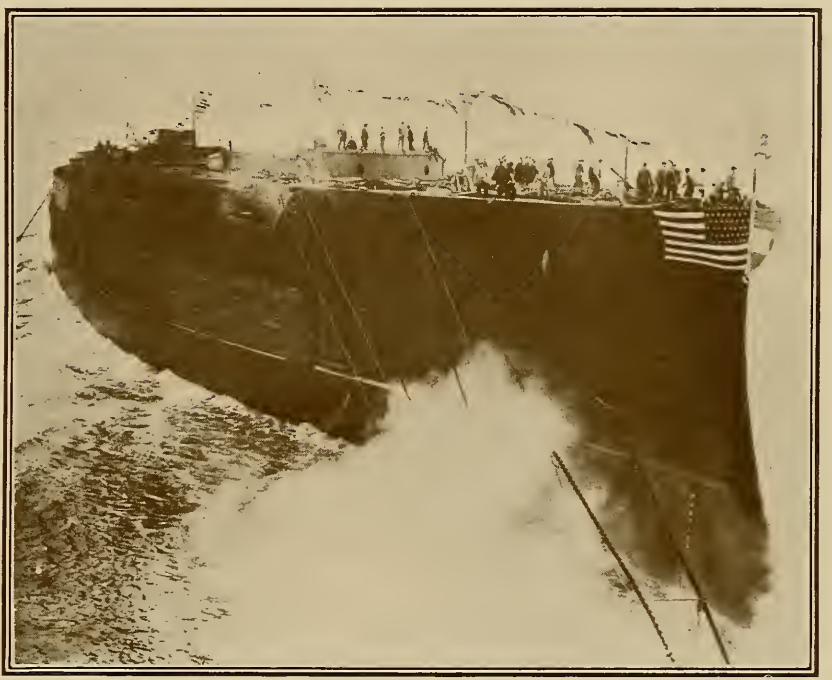
Señora de Saenz Peña, wife of the President of Argentina, had been designated sponsor for the ship, but she delegated the honor of the actual christening of the vessel to Señora de Naón, wife of the Argentine Minister.

It was a gala scene as one looked down from the press stand on the white and blue draped official launching platform on which were many well-known personages. Among the Argentines were Rear Admiral Onofre Betbeder, chief of the Argentine Inspection Commission at Quincy, and many other Argentine officers on duty at Quincy and from the yards at Camden, New Jersey. Lieut. Commander H. Diaz Pumara represented officers on duty in the steel mills at Pittsburgh, and those in Schenectady, at the General Electric Works were represented by Electrical Engineer O. D. Michetti.

Mr. Charles G. Curtis, the inventor of the Curtis Steam Turbine, from which the great ship will receive her motive power, could be seen near by. President Henry L. Grove, of the Cramp Shipbuilding

Co., of Philadelphia, President Charles M. Schwab, of the Bethlehem Steel Co., and many other prominent people and members of Congress and the legislature of Massachusetts were present.

A 60-foot streamer of white and blue ribbon, now and then lipped by the breeze, hung down the vessel's side. At its lower end hung suspended a silken mesh embroidered with the colors of Argentina, inclosing a bottle of champagne, which, after being broken, was to be inclosed in a mahogany box and sent to Señora de Saenz Peña. As the minute of 12.30 approached the murmured conversation of the crowd noticeably diminished in the excitement of anticipation.



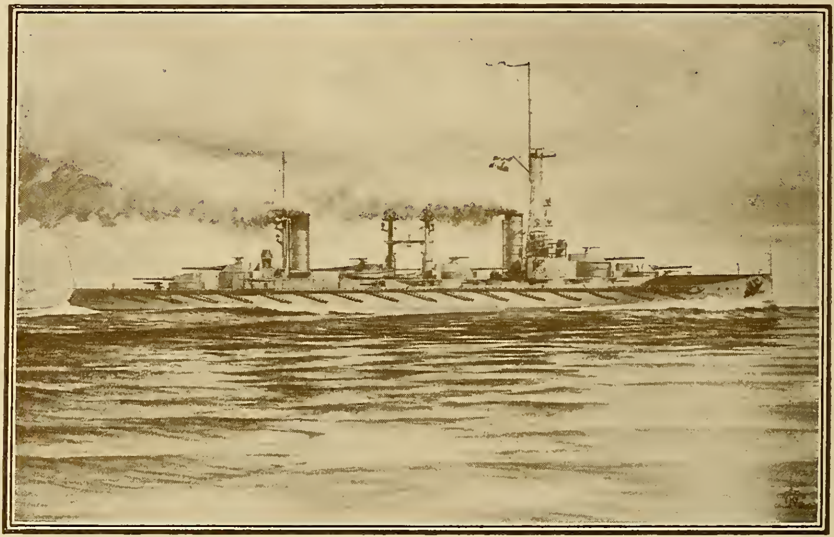
THE *RIVADAVIA* AT THE MOMENT OF LEAVING THE WAYS.

The launching exercises of Argentina's newest battleship were attended by a notable gathering of officials representing the Argentine and the United States Governments, prominent Naval and Army officers, and leading men in the commercial life of both countries.

The work of felling the great amount of timbering and heavier blocking which had been built around the massive hull had been begun an hour earlier than usual. Far down on the ways, in the dark shadows beneath the great red hull, 400 workmen, like Lilliputians releasing Gulliver, were knocking away the shores and splitting out the blocks wedged down under the great keel. Still further, under the supervision of foreman shipwright William H. Godfrey, who had charge of the launching, dozens of workmen smeared on the last few hundred pounds of launching grease, 6 tons of which had already been used.

Out of the blue zenith the steady hum of an aeroplane was borne down to the ears of the crowd, and Tom Sopwith, the aviator, circling immediately overhead snapped a camera and flew away on his course.

For an hour and a quarter the telling drives of sledge and hammer went on, until nothing but the sole pieces which held the launching cradle to the earth were left to be sawed away. A boatswain's whistle, followed by others, shrilled out. Workmen sprang back from the stop ropes and chains like cats. All sounds ceased except the rasping saw, saw, of the final severing of the sole timbers well forward. There was a lull, a moment of intense suspense.



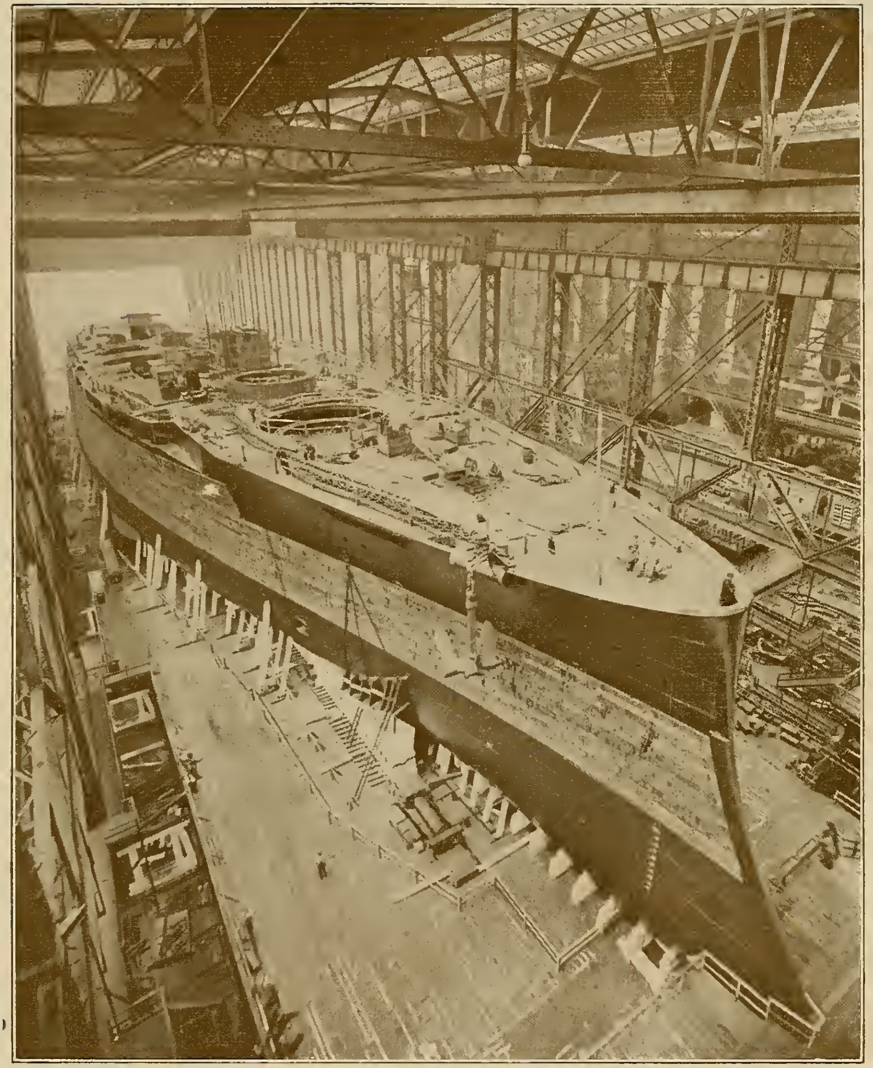
THE *RIVADAVIA* AS SHE WILL APPEAR WHEN COMPLETED.

This new addition to the Argentine Navy is similar in design to the latest dreadnought ships of the United States Navy. Her 585 feet of length, her beam lacking but 2 feet of an even hundred, a normal draft of 27 feet 6 inches and 22 feet 8 inches free height above the water line amidships, looming up to 25 feet 6 inches at her bow and falling away gracefully to 17 feet 1 inch astern, with a normal displacement of 26,500 tons and a maximum of 30,000 make her the great battleship that she is.

Crack! Admiral Bowles's keen eye had been fixed on the men below him. He spoke to Señora de Naón beside whom he was standing.

"*Yo te bautizo con el nombre de Rivadavia*" (I christen thee with the name of Rivadavia).

Crash! the bottle flew from her hand with a well-directed blow and shivered into atoms as it struck fully and squarely against the port bow plates. A shower of white foaming spray splashed back from the hull. Movement was scarcely perceptible the first few seconds, then the groaning of wrenching timbers was borne out from the smothered depths beneath her keel. A mighty Spanish and English cheer burst tumultuously from over 50,000 throats, expressive of joy and pride. It was exactly 1.58 when the 11,000 tons of steel and iron began to slide down the ways, gaining momentum with every foot



THE *MORENO* ON THE WAYS AT THE YARDS OF THE NEW YORK SHIPBUILDING CO.

Embodying in her construction all of the modern achievements in battleship building, the *Moreno* with her sister ship, the *Rivadavia,* represent the largest battleships of any nation. Her length will be 585 feet and her beam 98 feet. She will have a normal draft of 27 feet 7 inches and a trial displacement of 27,500 tons. The most modern of turbine engines will propel the new Dreadnought, and they are intended to develop 39,500 horsepower and produce a speed of 22½ knots sustained for eight hours.

leaving a path of splintered timbers, sending up showers of dust and splinters.

Shush-h-h! Her great stern plowed into the river, shoved a mighty volume of water before her, which flowed across the river and broke in a great wave on the opposite shore.

Drop! splash! went the heavy timbers, hawsers, and chains in rapid succession as her drags were let fall, and 100 feet from the shore the headway of this sea monster was checked and 11,000 tons of red-painted steel and iron floated quietly on the silvery surface of the water—the *Rivadavia* was launched.

Little tugs shortly made themselves secure to her to tow her to the fitting-out dock. The crowds from the yard now rushed through the ropes and down onto the great cradle. The huge vessel had contracted in perspective to a mere spot far down and beyond the long trellis of steel, and in her place were two sets of shining ways and a wreckage of splintered wood. Over the 5 feet breadths of the 700-foot groundways and the slightly smaller slidingways poured the crowd from behind the ropes, all eager to bear away some fragment as a souvenir of this auspicious occasion.

The guests on the launching stand waited until the official party, led by Admiral Bowles escorting Señora de Naón, had reached the ground, then followed to attend the special luncheon in the newly erected boiler shop, which had never been used, but which was certainly most amply christened by the magnum of champagne which was served to the guests.

The luncheon terminated with addresses opened by Admiral Bowles, who gave a hearty welcome and then said in part:

> You will realize from the *Rivadavia's* great cost and from the fact that it is, in operation, a work of the highest mechanical skill in a multitude of trades, that those who pay for such a vessel and those who engage in such occupations have reason for their belief that this ship is not only the greatest battleship, but the greatest peacemaker in these times.
>
> The name *Rivadavia* is of ancient Basque origin, but of obscure meaning. It is, however, a familiar name in Argentina, and carries with it always a suggestion of patriotism and devotion to the State, as it was the name of a great patriot, the first constitutional President of the Argentine Republic, who devoted an unselfish life to his country. * * *
>
> The importance of the vessel and its sister ship, the *Moreno*, to be launched by our subcontractors, the New York Shipbuilding Co., at Camden, New Jersey, is indicated by the fact that the president of the Argentine Inspection Commission is Admiral Betbeder, formerly minister of marine, under whose administration the project of this construction was initiated and carried through.
>
> In proposing the health and success of the *Rivadavia*, I couple with it our best compliments to the lady who has given the name to the ship to-day and that of his excellency, the Minister, Señor Naón.

Mayor William T. Shea extended the welcome of the city of Quincy in an appropriate speech, followed by Congressman Curley, who made a strong plea for reciprocity and commercial interchange with Argentina. Charles M. Schwab, president of the Bethlehem Steel Co., spoke briefly, complimenting highly Admiral Bowles's efficiency.

His excellency Dr. Romulo S. Naón spoke in appreciative terms of the resourcefulness of the United States and of our pleasant relations with Argentina, as did also Rear Admiral Betbeder, while Capt. D. Aguirre, with that delightful fluency of the Latin American, concluded: "We have watched with interest the sacred and traditional christening of this gigantic ship. The untamed metal has yielded to the anvil and this magnificent battleship of flawless lines will be the highest exponent of American naval construction and also the legitimate pride of the Argentine nation, which has conceived such a model of beauty, power, and improvement."

DISTINGUISHED REPRESENTATIVES OF THE ARGENTINE GOVERNMENT AT THE LAUNCHING OF THE *MORENO*, SEPTEMBER 23, 1911, AT THE YARDS OF THE NEW YORK SHIPBUILDING CO., CAMDEN, N. J.

Standing from left to right are: Señora de Naón, wife of the Argentine Minister to the United States; Admiral Onofre Betbeder, former Minister of Marine, now Chairman of the Argentine Inspection Commission in the United States; Señora de Betbeder, wife of Admiral Betbeder; Señor Romulo S. Naón, Minister of Argentina to the United States; and Master Naón, son of the Minister.

It was only less than a year and a half ago, on May 25, 1910, that the keel of the *Rivadavia* was laid, and a year or more will still elapse before this magnificent vessel will be fitted up as a flagship, with luxurious quarters for the 138 officers and adequate quarters for the crew of 1,000 men. The man who will command this $11,000,000 floating mine is Capt. José Moneta, a most able and efficient commander and a splendid navigator.

On being informed of the successful launching, President Taft telegraphed to Dr. Naón:

> I congratulate you on the successful launching of the largest battleship of the world, built in an American shipyard, and I sincerely hope your country will find her useful only in the peace she insures and never in hostile engagements. I heartily regret I am unable to be present at this interesting ceremony.

Again, on Saturday, September 23, the *Moreno*, the sister vessel of the *Rivadavia*, was launched at the yards of the New York Shipbuilding Co., Camden, New Jersey. The exercises, likewise impressive, were most fitting for an event of such importance, and were carried out in a manner worthy of the great Argentine nation under whose auspices they were held. Assembled on the launching stand was a large, distinguished gathering of representatives of the Argentine and the United States Governments.

SEÑORA DE BETBEDER PREPARING TO CHRISTEN THE *MORENO*.

As official sponsor for the *Moreno*, the Argentine Government had designated the wife of its distinguished ex-President, Señor Dr. José Figueroa Alcorta. She, in turn, delegated the actual christening of the vessel to Señora Betbeder, wife of Admiral Onofre Betbeder, Chairman of the Argentine Inspection Commission supervising the construction of the two ships in the United States.

Inasmuch as the awarding of this substantial contract by the Argentine Government to a United States firm was significant, not alone of the friendly official relationship but, even to a greater degree, of the increasing commercial intercourse between these two countries, it was indeed most fitting that there should have been invited to grace the occasion by their presence the diplomatic representatives from both countries, prominent Government officials, Naval and Army officers, and many of the leading business men of this country.

Upon Señora de Figueroa Alcorta, wife of ex-President José Figueroa Alcorta, the Argentine Government bestowed the distinction of sponsor for the *Moreno*. She, however, delegated the pleasure and

THE LAUNCHING OF THE *MORENO*.

The latest acquisition to the Argentine Navy. The project of constructing the *Rivadavia* and the *Moreno* was initiated under the administration of former Minister of Marine, Admiral Onofre Betbeder, who is now chairman of the Argentine Inspection Commission appointed to supervise the execution of this $22,000,000 contract.

honor of the actual christening to Señora Isabel Betbeder, wife of Admiral Betbeder.

The decorations at the yards were most pleasing. From the port bow of the vessel and the artistically draped launching stage there fluttered the national emblems of Argentina and the United States. Side by side, adding color and splendor to the scene, the flags of these two countries distributed at several points silently proclaimed the mutual sympathy and respect of the one nation for the other.

The usual work of freeing the launching cradle from the huge mass of timber and steel having been accomplished, at an appointed signal Señora de Betbeder crashed the bottle of champagne upon the side of the hulk, and at exactly 27 minutes of 3 o'clock the ponderous and massive framework, seemingly squat and ugly without the superstructure which will later give it grace and stateliness, glided down the ways, sent up a roaring volume of spray, and a moment later was floating calmly on the sparkling surface of the water. Smoothly and without an accident to mar the well-planned event, the *Moreno*, one of the greatest of all the world's great battleships, had been launched.

Though the Department of State of the United States was personally represented at the launching, Acting Secretary of State Hon. Huntington Wilson, sent the following telegram of felicitation, on behalf of the United States Government, to the Argentine minister, as a further expression of the cordial feelings entertained by this country toward her sister Republic to the south:

Sr. Don Romulo Naón,
Argentine Minister,
(Care New York Shipbuilding Co.)
Camden, New Jersey.

I wish to extend to you, in the name of the Government of the United States, most cordial congratulations upon the occasion of the launching in American shipyards of the second great Argentine battleship. May the influence of these powerful additions to the Argentine Navy be ever potent in the cause of peace, and having already afforded so signal an opportunity to our respective countries for more perfect mutual acquaintance, may they stand a monument to our ever-increasing friendly relations.

Huntington Wilson,
Acting Secretary of State.

This message of congratulation was received with much satisfaction by the Argentine representatives in attendance, and Minister Naón replied in a cordial and appreciative manner to the Secretary of State by a telegram, a translation of which is given below:

Philadelphia, *September 23, 1911.*

Huntington Wilson,
Acting Secretary of State, Washington, D. C.

I have had the honor to receive the telegram wherein you have been pleased to congratulate me in the name of the Government of the United States on the occasion of the launching in American shipyards of the second great Argentine battleship *Moreno*. I thank you heartily for this courtesy, which accentuates the increasing sympathy and regard with which the people and the Government of this great Nation view the advancing progress of our own, which is attached to the United States by the warmest cordiality, and by the admiration which its notable development in every aspect always awakens among us.

ROMULO S. NAÓN.

There is a famous painting of a squadron of beautiful white-painted battleships at anchor on the quiet waters of a harbor. "The Peacemakers," I believe, is the title and such should be their greatest mission, to guard the weak and uphold the right in the great family of nations. Let us hope that the great steel sides of the *Rivadavia* and the *Moreno* may never through necessity don the grim, gray paint of war and that the boom of their guns will only be heard in the salutations of peace.

THE *SARMIENTO*, TRAINING SHIP OF THE ARGENTINE REPUBLIC.

AMERICAN REPUBLICS AT THE TURIN EXPOSITION[1]

THE features which immediately strike the visitor to the International Industrial Exposition at Turin are its accessibility, its natural beauty of site, and the artistic treatment of the buildings with relation to their surroundings. Turin has patriotically dedicated its largest park, containing 250 acres of woodland, threaded with roads, almost in the heart of the city, to the purposes of the exposition, which was formally opened on April 30, 1911, and will remain in progress until October 31, 1911. The park lies on both sides of the River Po, one bank of which is skirted by a range of high hills, covered with rich verdure and dotted here and there with white villas. Numerous handsome bridges span the river, giving ready access to the exposition buildings on either side, while motor boats serve as comfortable means of transportation to and from the various exhibits.

ONE OF THE ENTRANCES TO THE EXPOSITION.

In the foreground is the monument to Duke Victor Amadeus II of Savoy.

The exposition as a whole is fully entitled to be ranked with the best of the international expositions so far held. Its buildings are splendid types of the tendency of modern architectural and artistic taste manifested in the various countries represented. The Italians, especially, seem to have given wings to their innate artistic conceptions, resulting in brilliant, sometimes florid, but always charming examples of structural art.

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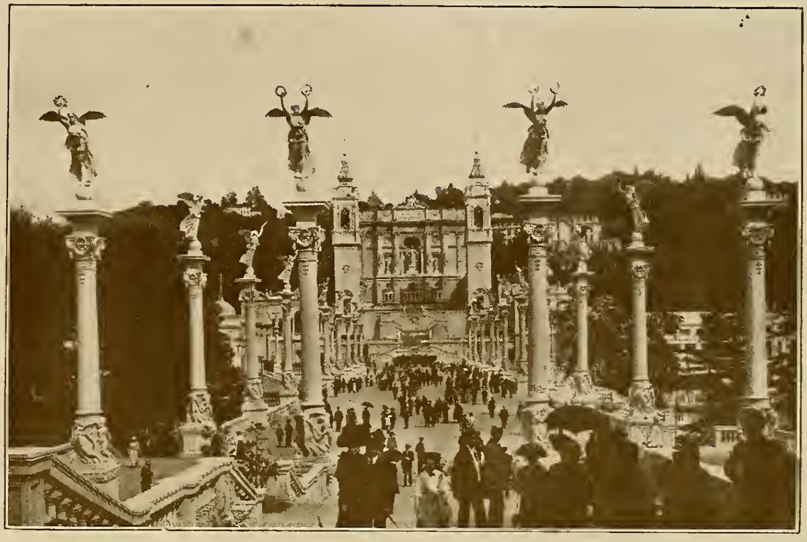
[1] By Charles Ray Dean of the United States Government commission to the Turin Exposition.

Turin, the capital of Piedmont, in northwest Italy, is worthy of a visit as a city, regardless of the exposition. It is handsomely and solidly built, having wide streets and broad boulevards rectilineally laid out and numerous spacious open squares and parks.



BRIDGE WITH MONUMENTAL FOUNTAIN OVER RIVER PO.

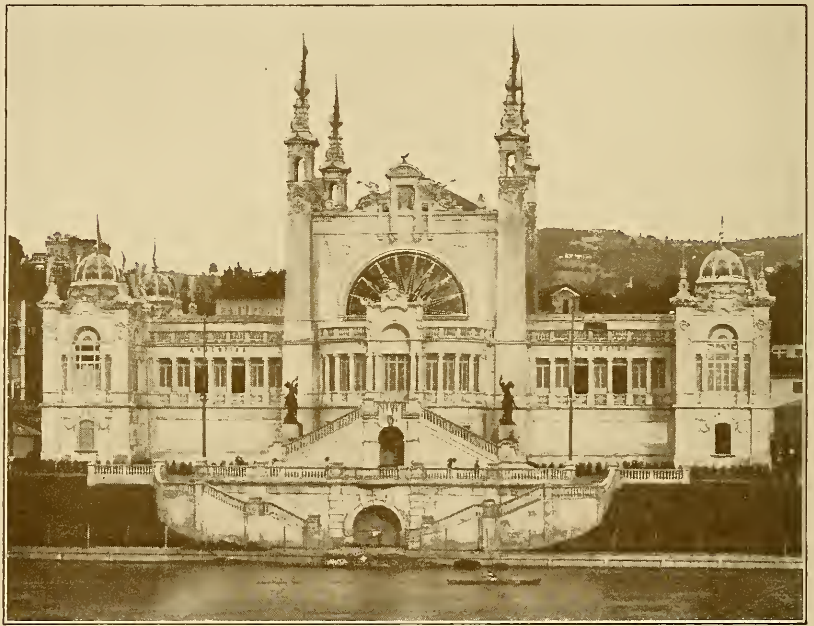
An exponent of the architectural beauties of the exposition.

VIEW FROM ONE OF THE BRIDGES OVER THE RIVER PO.

The needle like spire in the distance crowns the National Museum and is 535 feet in height.

A singularly attractive feature is the 6 miles of high, pillared arcades spanning wide sidewalks lined with shops and brilliantly illuminated at night. These arcades afford a fascinating promenade and rendezvous for the Turinese.

Another attraction which alone would justify a long journey may be mentioned. A short trolley ride up a very high hill of the city gives one the most superb extended view of snow-capped moutains to be had in all Europe. The Italian Alps, with glistening peaks, form an entrancing panorama 200 miles in length. In the foreground stands the city of Turin in the beautiful wide fertile valley of the River Po, which sweeps along to the east on its way to the Adriatic Sea.



MAIN BUILDING OF THE ARGENTINE REPUBLIC.

In this pavilion the Argentine Government displays the wonderful products of its soil, its mountains and rivers, as well as of its growing factories and industries. A small model of a meat-refrigerating plant and motion pictures descriptive of the country's progress add greatly to the attraction and interest of the exhibit.

Turin dates back to 218 B. C. and has a glorious history of achievement in war and peace, in art, science, education, and state polity. It was to Turin and Piedmont that all Italians looked for leadership in their struggle for national unity in 1848–1861. There they found the great Victor Emanuel II, and the equally great Count Cavour, who successfully made a united Italy an accomplished fact. It is this event which the exposition is designed to celebrate on its fiftieth anniversary. Chosen to be the first capital of the Kingdom of Italy in 1861, an advantage enjoyed but three years, she loyally conceded the superior claims of Rome as the natural capital of the nation, and courageously undertook to make of herself a great commercial metropolis. Confident of her future, she has pushed forward and grown from a city of 204,000 in 1861 to double that number. Prosperity is written on face of the city and her people, begging and idleness are seldom seen, mills and factories, resounding with the noise of industry in action, shops, markets, and streets all bespeak progress, contentment, and inherent commercial power. Such a city is an appropriate place in which to hold an industrial exposition.

About 35 nations have participated in the exposition. A survey of it as a whole discloses the fact that the exhibiting countries are divided into two very distinct groups, according to the object they have had in view in participating. The European countries and those of the Far East have aimed at increasing their trade with Italy and the rest of the world, and accordingly have devoted their attention to the procuring of a large participation on the part of their manufacturers, producers, and merchants and have brought together extensive interesting and handsome exhibits of their handicraft and products.

BUILDINGS OF THE BRAZILIAN GOVERNMENT.

Brazil not only contributed a pavilion for the display of its productive agricultural and mineral resources but also erected an administration building noteworthy for the splendid interior mural decorations, executed by the best Brazilian artists. On the broad passage connecting these two buildings coffee is dispensed under picturesque canopies draped in the national colors.

The group of American nations represented have had chiefly in view the development of their enormous national resources by attracting settlers and capital to their shores. Their exhibits, therefore, are not those of manufacturers and producers, but are for the most part exhibits prepared by the Governments of those countries.

Latin America is impressively represented at the exposition in a group of 4 handsome buildings. Two of the Republics which are engaged in worthy rivalry for general recognition as leading countries in South America—Argentina and Brazil—have buildings of their own, which are noteworthy contributions to exposition architecture. These two countries have the largest colonies of prospering Italians within their borders of any country save the United States, and this makes a tie between them and Italy which is growing stronger every year. Argentina has gathered into its building striking and instructive examples of the wonderful products of its soil, its enormous mountains and rivers, as well as of its growing factories and industries. Brazil has not only an admirable building containing attractive exhibits of its minerals, its unrivaled coffee industry, its forest products, etc., but has a beautiful administration building, the interior mural decorations of which (by the best Brazilian artists) are thought to be exceptionally fine works of art.

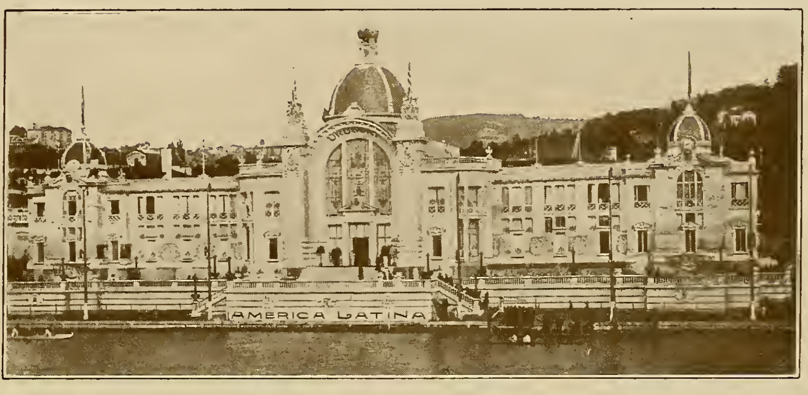
BUILDING OF THE UNITED STATES GOVERNMENT.

For the exhibit in this dignified structure the Departments of the Interior and of Agriculture furnished a most complete display of all their branches of activity. An additional feature of the exhibit was the moving-picture performances showing work on the Panama Canal, Army and Navy life, life-saving drills, etc.

Both of these countries have also shown their progressive spirit by installing moving-picture plants in buildings specially erected for the purpose. In those they show at short intervals extremely interesting views taken from industrial life and the fascinating scenic parts of their land, while on the walls of the rooms where the pictures are shown are hung placards with striking statistics showing the growth of population and commerce, the extent of territory, railroads, etc.

Chile, Dominican Republic, Ecuador, Peru, Uruguay, and Venezuela have united in the erection of a spacious building for the display of their products and resources. Uruguay, the limited size of which is no fair measure of its progressiveness and importance, has contributed most to the construction of the building and occupies a prominent and extensive portion of the interior space. Its exhibits impress the visitor most favorably and are an excellent index to the character of its people.

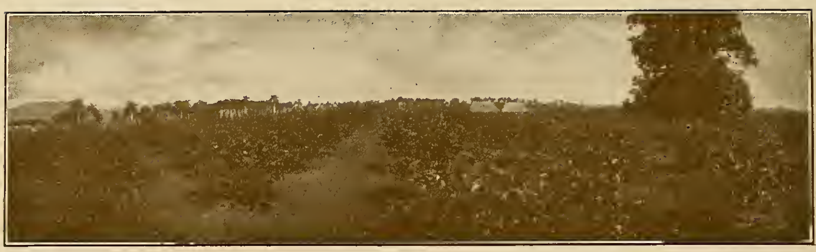
The United States Government has never before participated in a foreign exposition in so extensive and creditable manner. Its handsome and dignified building, 600 feet long, contains by far the finest display of governmental industrial activities of any at the exposition. The Departments of the Interior and of Agriculture have furnished most complete exhibits of all their branches of activity. A working model of the Panama Canal is a feature attracting much attention. Cinematograph exhibitions of work on the canal, of Army and Navy and life-saving drills, etc., are given, furnishing a living interest to the display.



JOINT EXHIBITION BUILDING OF LATIN AMERICA.

Spacious pavilion jointly built and occupied by the Republics of Chile, Ecuador, Peru, Dominican Republic, Uruguay, and Venezuela. The exhibits of these nations serve as a splendid index to the progressive spirit and development of these countries.

A division of opinion exists in the public mind as to the advantages resulting from international expositions, either to the countries in which they are held or to those participating. Financially they generally involve greater outgo than return. But it can not be gainsaid that any such project which brings nations and their peoples into closer contact, and gives them better knowledge of each others' desires, aims, activities, and aspirations, has a tendency toward the general good and the advancement of each nation.



A CARIBBEAN ISLAND[1]

TREASURE ISLAND was an alternative name well fitted for the bit of sea-surrounded land that lies 60 miles south of the coast of Cuba charted as the Isle of Pines. Whether this island was the scene of the novelist Stevenson's thrilling story leads but to academic discussion in which the strongest affirmative argument would be the miles of golden groves with sturdy trees bending low under the burden of their fruit. Here is pictured proof of the treasure in the soil. Thousands of acres of low-priced pasture land have, magiclike, been metamorphosed into valued grapefruit orchards. A Spanish penal colony has been changed to a prosperous self-reliant American community. Such is the transformation accomplished by a handful of pioneers working under many discouragements, not the least of which is the sense of injustice done them by their own people.

The Isle of Pines, an appanage of Cuba, has filled an interesting page in history, and from its first discovery it has been the scene of incidents curious and varied. Las Casas, who chronicled the story of the Columbus voyages in his Historia de las Indias, writes that the admiral discovered the island during his second voyage, in June, 1494, on St. John the Evangelist's Day, therefore naming it "Evangalista." We are told that Columbus only stopped to stock his ships with wood and water, making a hurried departure, for a fear that impelled them to the verge of mutiny reigned in the minds of his sailormen. This fear was due to the curious appearance of the shallow seas to the north of the island, where the water is so clear that bottom, a sand-white carpet with great dark patches marking seaweed growths, is distinctly visible. It was these dark patches that frightened the mariners, for in their ignorance they thought them openings in the ocean's bed wherein their barks might sink at any moment.

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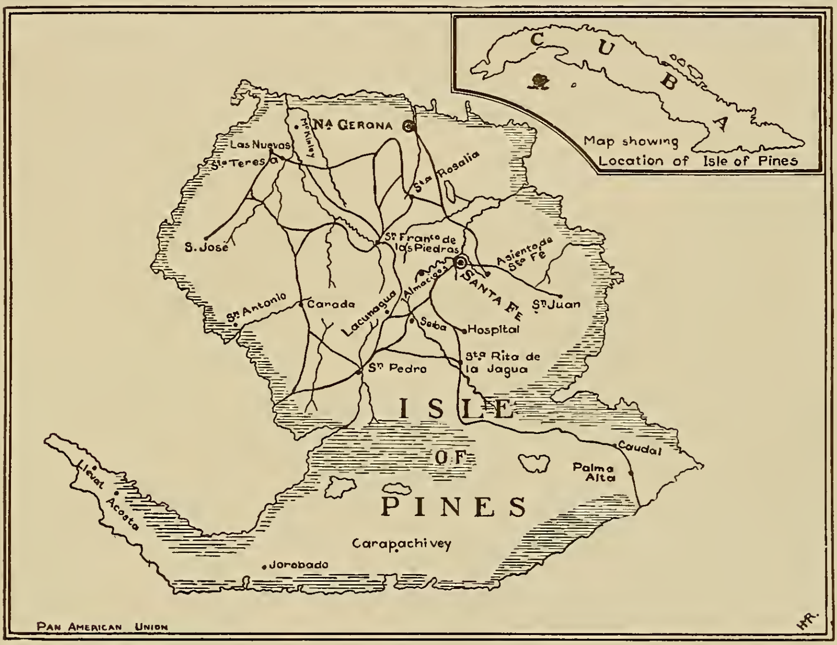
[1] By Granville Fortescue, of Pan American Union staff.

Navigators bisect the isle with longitude 83° 30′ west and latitude 21° 40′ north, where it makes a patch of earth 45 miles "round," rising from a light-green sea. The geology of the islet is remarkable because in its small area it gives us two examples of how Nature works in her land-making laboratory. The northern section, about 600,000 acres, is the result of what might be called the explosive system, volcanic, with marble hills and spurs of quartz and limestone, all telling the story of the island origin in their formation, while the southern section, 300,000 acres, moored to the northern part by a swamp, might be named the cumulative system, coral. In truth the isle is really two islands, the "South Coast," as it is called, being joined to the island proper by the narrowest neck of land, often submerged.



MAP OF THE ISLE OF PINES.

The Isle of Pines lies some 60 miles directly south of Cuba, at that island's narrowest part. Its area of 986 square miles is 99 square miles less than the land superficies of the State of Rhode Island.

This "South Coast" merits a brief description, for it holds all the setting of a jungle wilderness save the fauna, and it has formed itself by a highly interesting series of developments. The basic foundation is coral rock. To arrive at an idea of its composition picture a bed of soft stone leached until it seems a great gray sponge-like area, the perforations varying in shape, size, and other dimensions with all the characteristic irregularity of the porifera. This jagged porous surface is covered with a sea-born soil, which with the passing of ages has become surpassing fertile because of an ever-increasing accumulation of decayed vegetation. Yet from this top soil, with a "subsoil" of rock, tower up gigantic hardwood trees—mahogany, cedar, and indigenous growths—all surrounded by the dense underbrush of an almost impenetrable jungle. How the poor soil conditions can support such luxuriant vegetation is something of a mystery. A possible explanation lies in the fact that the wandering roots of the trees that stretch over the coral, as though they were great entwining tentacles, draw life for the trunk from these ever-moist depths. The coral holds the rain water in the many cup-like openings and acts as a "mulch" that favors the development of the trees and underbrush. Hardwood is the wealth of this section of the Isle of Pines. The people engaged in cutting the trees and marketing the logs are for the most part "caimaneros" West Indian English of various shades, from Great and Little Cayman Islands, British possessions lying about 150 miles south. Tobacco poles, oversized hardwood bean poles they seem to the Kansas farmer, are exported in

(Photo from "Isle of Pines." I. A. Wright.)

DOCK SCENE AT NUEVA GERONA.

At present there is one regularly maintained connection between the Isle of Pines and the world at large, that afforded by light-draught steamers operating between two ports (Jucaro and Nueva Gerona) and south coast ports of Cuba. This service is supplemented by a monthly schooner between the isle and the city of Mobile, Ala.

Photographs from "Isle of Pines," I. A. Wright.

MOTORING THROUGH THE ISLAND.

Macadamized Government highways and the private roads which supplement these interconnect the various settlements and towns. They afford excellent driving, bicycling, and automobiling, and give the tourist a variety of charming scenes rich in tropical beauty.

quantities across to Pinar del Rio Province, in Cuba, where they find a ready sale among the planters.

The "caimaneros" are a picturesque lot upon whom has descended the glamor of the romance with which tradition overlays these shores since the days of pirates and wreckers. Of course they are fishermen, and besides adding variety to their daily bill of fare, they increase their income by hunting a tortoise here, valuable for his shell.

A voyage in one of the featherweight canoes in which they ride the breakers whitening the turquoise sea at the entrance of a ledge-protected cove is a thrilling experience and calculated to fill one with respect for the seamanship of these half-breeds. Let us leave the "South Coast" for the north, the real island. Here conditions are essentially different—a rolling country with interspersing hills and rivers, in appearance reminding one of the fertile parts of Florida, a resemblance much heightened by the pine trees that cover much of a sandy soil area. These pine trees, strikingly visible from a distance, gave the island its name, Isla de Pinos, from which we have the Eng-

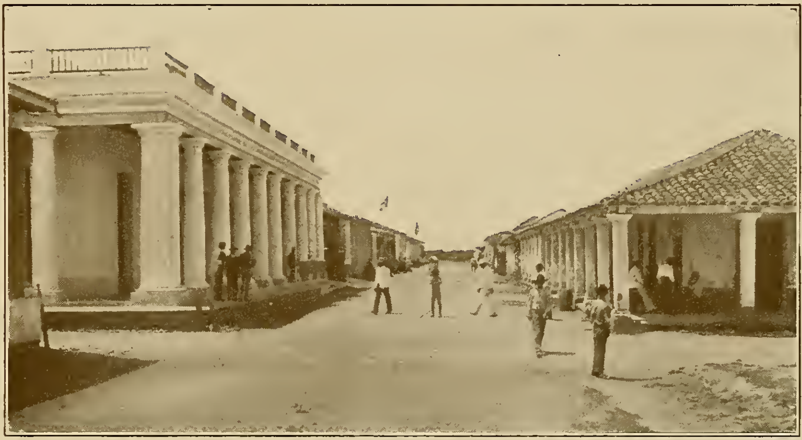
(Photo from "Isle of Pines," I. A. Wright.)

PINES OF THE ISLE.

From the pine tree, which is characteristic of the temperate zone and grows over the greater part of the island, the Isle of Pines received its name. The luxuriant flora of the island combines many of the varieties of Florida with the large hardwood trees of Central America and Mexico.

lish translation, Isle of Pines. Isle of Pines! There is that something in the words which seems redolent of the soft, sweet winds that ever blow caressingly over its vernal valleys. The smoothness of the name is all opposed to the idea of rapine and murder. And yet for years this beautiful island was a pirate rendezvous. Drake came first, four years before the end of the sixteenth century, when he massacred the few colonists he found, and from that date the fame of the island as a convenient and suitable base spread among the freebooting fraternity.

The most ferocious of the pack of sea wolves that hunted the seas in the late sixteenth and early seventeenth centuries, English, Dutch, or French, all found security and shelter on the Isle of Pines. From Morgan, the knight who won his spurs by successful robbery, rapine, and murder, to Mansfield, who waged war single handed against the throne of Spain, all the heterogeneous crews of the sea rovers knew the shoals and the sheltered bays behind which their ships could lie in safety under the lee of the island. From here they sallied forth to attack the lumbering Spanish galleons, heavy laden with loot from Peru, and back they came again to divide the spoils and refit for another raid.



STREET SCENE IN NUEVA GERONA.

This town is the capital of the municipal district into which the Isle is constituted. Its bright-colored houses, red roofed, with porticoes under which pedestrians pass, as on a sidewalk, render it a typical Cuban town of unique attraction. Along the streets are flourishing places of business, including a bank, two weekly newspapers printed in English with Spanish supplements, several general stores, and a well-stocked cafe. On days when the boats from Cuba are scheduled to arrive or depart, Nueva Gerona becomes the rendezvous of the settlers from neighboring towns, and the place assumes the appearance and atmosphere of a characteristic busy city of the United States.

These facts have left a heritage of buried-treasure tales; but while many have dug in just those spots that seem ideal for the concealment of ill-gotten riches, yet there is no authoritative evidence to the effect of buried treasure being recovered. There is a rumor that once someone unearthed a brass-bound chest of dubloons near the shore, and went home to Buffalo to live in luxury ever after on the wealth so discovered. If you doubt the tale, the chest can still be seen lying open on the sand to prove it.

It is to be regretted that the conferring upon well-deserving recipients of large blocks of real estate by "royal" grant has gone out of vogue. It certainly helped to promote colonization. Perhaps we have an analogous system embraced in some railroad concessions. The Isle of Pines was presented by royal grant from the Crown of Spain to Capt. D. Hernando Pedroso in 1630 with the understanding that he transform the "pirates' lair" into a "flourishing colony"—to use two common descriptive phrases. The island passed to the Duarte brothers by inheritance in 1706, and to these joint owners all title should be traced. The island has been the mecca of investigators. From one Franco, in 1792, down to the author of the present article in 1908, the potentialities of La Isla de Pinos have been matters of constant report. Conditions have varied, but there is a singular unanimity in one common conclusion of all the investigators—"that the

HOTEL CEBALLOS, AT SANTA FE, ISLE OF PINES.

Santa Fe is considerably the oldest and one of the most pleasant places of residence in the Isle of Pines. On the north side is a magnificent rectangular plaza, shaded by laurels; facing this is the comfortable Hotel Ceballos, an old Spanish hostelry managed by a most obliging landlord, very popular with the Havanese who come to the Santa Rita Springs for their medicinal waters. This hotel lays claim to being the oldest in the island. It was erected in 1862, but its brick walls were not put up until 1876–77.

most important need of the island was a self reliant population." At last this "need" is filled. But this almost-forgotten islet passed through many periods of tentative development before it reached the present state of prosperity. Not the least interesting epoch of the island's history was when it served as a sort of "slave-fattening" depot. In the days when the traders in "black ivory" found the difficulties of their profession increasing in the ratio of prejudice against slave holding their profits decreased in a like ratio. They attempted to rectify this loss in a measure by bringing a more valuable article to the available markets. The negroes shipped from the Kongo were often in poor health, and their condition became pitiable before they reached their journey's end. Imagine the effect of a six-weeks' voyage, crowded under hatches, in the Tropics. Contrast the joy of these unfortunates when turned loose to work in the fields of a beautiful land, with abundance of food, after the horrors of the over-sea crossing. The slave market is forever done away with, yet, in fancy, one can understand the relief of the slaves and their comparative contentment with their lot here and their sorrow when sold in bondage away from the beautiful isle.

TOURISTS STARTING FROM THE AMERICAN HOTEL AT SANTA FE, ISLE OF PINES.

Besides the Spanish hotel of Ceballos, there is an American hostelry much frequented by tourists from the United States. It is a low one-story building, with colonial pillars and thatched roof, but excellently equipped and managed.

But let us leave the story of the early vicissitudes and turn to the last chapter in the history of the isle—the American assimilation. First let it be plainly stated that no opinion anent the status of the Isle of Pines, as interpreted from the text of the Treaty of Paris, will be put forth in this paper. "Esta prohibida," as the sign reads regarding smoking in the Habana theater lobbies.

On the day after the fiesta del Santo Patricio, the 18th day of March, 1908, an American timber hunter landed on the Isle of Pines, drawn by the rumors of the wealth of the "South Coast" of the island in mahogany and cedar. The atmosphere of romance that must have enveloped the isle made no impression on the soul of this practical "hustler," whose appearance spoke the ebb-tide hour of his finances. As he crossed the island his business mind sensed the commercial possibilities of its broad valleys, given over wholly to the raising of a few lazy cattle and active pigs. He was not a man without imagination, as subsequent events proved, but at the time of his "discovery" the island was to him a simple business proposition. That he was of the stuff of financiers is patent from the fact that he bought 17,500 acres of the best land on the island for $200, and he did not have the $200, his entire roll being in girth the approximate

BIBIJAGUA BEACH PICNIC PARTY, ISLE OF PINES.

Originally a sugar plantation existed in the Bibijagua district, but this old order of things is gone, and where once existed a vast estate there is now a well-platted subdivision of lots available for settlers.

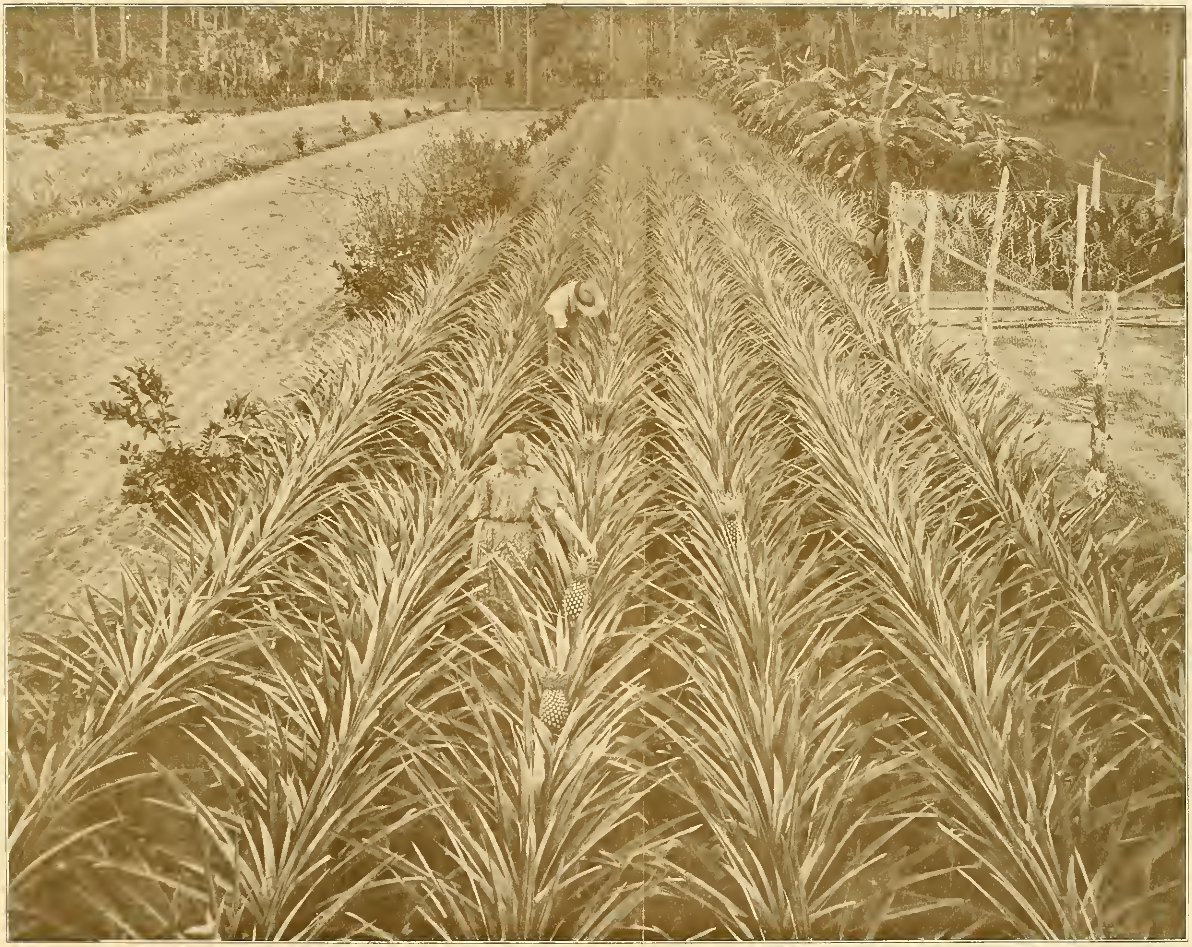
CITRUS-FRUIT CULTURE ON THE ISLE OF PINES.

American settlers on the Isle of Pines have devoted themselves mainly to citrus-fruit culture. Their groves lie on the steep sides of the Ceiba Hills; they dot the level country around Nueva Guerona and at Colombia and Santa Fe; they are green on the white sand of Los Idios and in the newly turned soil of the San Pedro tract.

thickness of fourteen $1 bills. Strictly speaking, it was only an option he held for a promise the $200, the agreement for sale being inscribed on a half sheet of note paper, torn from a letter addressed to C. M. Johnson. That is the name of the American discoverer of the Isle of Pines. The story of how he ''found'' the money to cover the first option and bought up others, formed a company of 26 Americans to turn the island into a modern real estate scheme, applied the ingenious ''adjacent islands'' interpretation, and finally retired from island affairs with a fortune sometimes estimated at a quarter of a million, is one that would provide many texts for commercial college valedictorians. Interesting as the career of Mr. Johnson was on the island, yet he can have little share in the credit for making it the Garden Isle. For the present settlers, after years of continued toil and infinite patience have converted the pasture lands into some of the finest citrus orchards to be found in Cuba. Theirs is the credit. It is hard to index the island's many charms. Perhaps it finds its greatest attraction as a refuge for the winter riven dweller in northern climes in the wholesomeness of the climate. The winter climate of the Isle of Pines is ideal. The air has an indescribable quality that lets the temperature defy the rigid markings of the thermometer. The northern winds that play among the pine trees are as soft as the touch

NATIVE STYLE HOUSE ON THE CALLEJON RIVER, WEST M'KINLEY, ISLE OF PINES.

The American dwellers of the island have erected for themselves dwellings of native pine, usually built in bungalow style, although occasionally there are exceptions where houses are built of brick, stone, and cement, but excepting in the towns, the dwellings are usually constructed of wood.



GROWING PINEAPPLES.

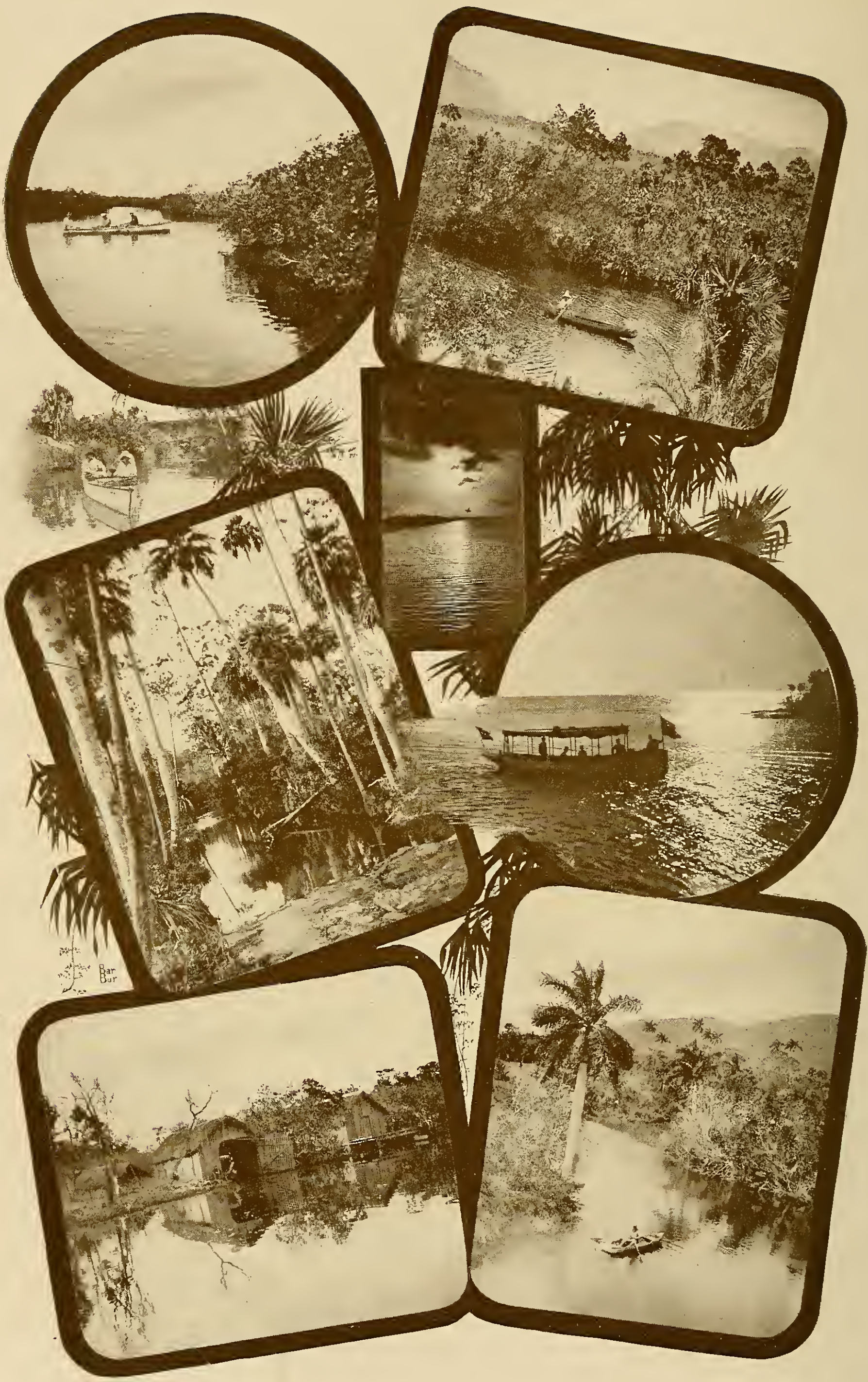
It is often erroneously stated that the isle takes its name from its pineapples. This belief has undoubtedly gained color from a statement frequently made that it is not possible to produce anywhere better pineapples than are grown on the Isle of Pines. Good business management, however, coupled with a scientific knowledge of how to grow pines, renders this one of the most profitable industries on the island.

of butterflies' wings, to borrow a phrase from the poets, and the sunshine seems to distill a perfume from the resin that truly sweetens the breezes. It has been said that the perfect is beyond description. This is true of the winter climate of this island. The only criticism that the most difficult to please would dare offer in complaint might be that it is monotonously good. The sheltered position of the island protects it from the north while the southwest trades blow fresh from the Caribbean with a steadiness that makes for such an equable atmosphere which can not be rivaled in any section of the globe. This is not hyperbole but fact.

The two old towns of first settlement, Nueva Gerona and Santa Fe, still hold much of their Spanish setting despite the invasion of the hustling American, who indicates his presence by the typical country store that caters to the universal needs of the colonists, and the busy bank. Nueva Gerona, which is the capital of the island, has been fortunate in having for its mayor a native who combines all the courtesies of his Spanish ancestry with good business sense, which has enabled him to turn the current of the islands' present progress to the advantage of the little town he loves so well. The many municipal improvements that have been carried out during his term of office serve as monuments to his industry. Santa Fe rivals the sister town in civic pride, and its residents are alert in the matter of the improvement of their ''pueblo.''

Frankly, it would be impossible to take up in detail the history of the wonderful progress made by all the American settlements. Here will be be found the virile virtues put in constant practice each day by a people who prove themselves worthy descendants of their pioneer ancestors. Their capacity for hard work is only equaled by their thrift and their pride in their individual community. The rival claims of the distinct settlements recall the early days of our western cities, but while each may contend that the soil in a particular location is beyond excellence more suited for citrus-fruit culture than any other, yet are one in loyalty to the Isle of Pines.

The island is entirely owned by these Americans. Of the 900,000 acres of estimated surface the part that remains in other titles is so small as to be negligible. The present owners have developed the principal industry of the island—citrus-fruit growing. The price of grapefruit is the measure of prosperity. The soil and climate have by the experience of many proved to be distinctly adapted to the growth of the acid fruits, and while time and money are needed for the full development of a lemon or grape fruit grove, yet results justify the expenditure. No similar scene can be more impressive than the rows and rows of trees, shorn up under the weight of fruit they bear, that stretch away from the porch of a house of some prosperous planter. Such a view must give keen pleasure to the one



Photographs from "Isle of Pines," I. A. Wright.

THE ISLE OF PINES.

On all sides the many small islands, the coral reefs, the long inlets, and deep rivers afford an ideal circle of snug harbors for shipping and boating of all kinds. The calm ocean at all seasons tempts the yachtsman and fisherman. These waters are, in fact, becoming much frequented by devotees of the reel and line, who find all the sport they seek in the capture of many fish, from the shark and tarpon to the red snapper and lobster. Turtles abound, weighing from 50 to 400 pounds. Sea bathing can be indulged in every month in the year.

who has taken his 20 acres of virgin pine land and by dint of the work of his own hands and the care bred of constant thought, turned them into an orchard of waving green and gold.

Many have confused the name of the island, connecting it in some way with the pineapple. As already stated, the name is derived from the many pine trees growing there; yet it were not inappropriate that the title should come from the fruit, for the finest pineapples I have ever seen are grown in its valleys. As yet pineapple cultivation has not been made the business success that it promises. A number of reasons has made it difficult to market the fruit successfully.

Tobacco was grown with great profit on the island in certain specially suited sections during the Cuban war of independence; but tobacco growing is almost an esoteric art the secret of which is only known to the "colonistas" of the Vuelto Abajo district in Cuba. It might be well for the Pinero who finds his land well fitted for the raising of the nicotine weed to contract with some of these Cubans to start his tobacco field and work with them till he knows all the secrets of their system.

Besides these special agricultural products, the island blooms with all the tropical and semitropical vegetables and many of the hardy tubers from the Temperate Zone, so he who seeks his winter home on those inviting shores will plant his kitchen garden when he sets his nurselings out.

Perhaps the most neglected, yet to the writer the most potential, gifts with which nature has endowed the Isle of Pines are the thermal springs. These are beneficial beyond the mere figures of the analysis of the curative properties they possess. Without reservation it can be stated that, granting proper medical supervision, this island could be made into one of nature's sanatoriums, a winter health resort without rival. But invalids need every care that our modern civilization has developed—a well-arranged, up-to-date hotel, the best of food, a restful setting, and all the little luxuries that make for the comfort of the ailing. The man who turns this idea into a reality will not only achieve great profit for himself, but he will be a real benefactor of those who suffer.

The problem of the people of the Isle of Pines is that of transportation. The cost of freight and transshipments across Cuba is too great a burden for the island producer to bear. It is about 800 sea miles from Siguanea Bay, on the west coast of the isle, to New Orleans. Siguanea Bay offers a fair harbor for vessels not drawing more than 16 feet. If the planters could induce some reliable fruit steamship line to make their island a stopping point, it is safe to say that the present prosperity of the inhabitants would be doubled; or, laying aside sectional pride and combining in a plan that would ultimately work to the benefit of all, the more prosperous owners of citrus grove lands might form a steamship company which would operate vessels between the Isle of Pines and the most convenient American market. Such is the present need.

Little has been written in this article anent the land companies for obvious reasons. Naturally, these companies are not run from altruistic motives, yet they deserve great credit for the work they have done in bringing order out of chaos in the matter of titles and boundaries. Despite the climate and the mineral springs, some active citizens are not in the island entirely for health recuperation. Human nature is human nature the world over, as has been remarked before, and the Isle of Pines is no exception. The Arabs have a motto, "Only a fool buys a hidden horse."

CITRUS FRUIT ESTATE "VISTA HERMOSA" AT LA CEIBA, ISLE OF PINES.

Many varieties of fruits can be planted on a single plantation, to correspond with the different seasons and the changing demands of the markets. As an example of this, one plantation alone boasts of two varieties of grapefruit, two of lemons, several of oranges, besides other fruits.

In conclusion, no better testimony as to the fertility of the island can be given than that contained in the following extract from Senate Document No. 311:

> As an example of the wonderful variety of product, a finca, or farm, of less than 33 acres actual cultivation produces coffee, sugar, chocolate (cocoa), coconuts, plantains, bananas, boniatos (sweet potatoes), yucca (cassava, furnishing laundry starch), malangoes (answering for potatoes), rice, beans, lettuce, tobacco, honey, fowls, pigs, cattle; also a few pineapples for home use.

To this list the grapefruit, orange, and lemon can now be added.

It would seem that in this colony of Americans, who have turned a profitless waste into an island garden, we have the answer to those critics who claim that the tropic Philippines are valueless to the people of the United States.

Pinero politics can not be discussed here—in fact, there is little need to discuss them—for those who have gone to this land with hearts full of hope, who have worked out their own salvation amid unfamiliar surroundings, among foreigners, who feel bitter injustice has been done them, yet have proved themselves desirable citizens by their works—these men, despite the political tangle, are the real makers of the Isle of Pines.

THE POWER SITUATION ON THE WEST COAST OF SOUTH AMERICA[1]

AFTER leaving the Isthmus at Panama, the first city of importance to the south is Guayaquil, Ecuador, some 90 miles up the Guayaquil River from the Pacific coast. This river is over a mile wide at Guayaquil, and has no power possibilities, owing to the flatness of the country.

The railroad from Duran, opposite Guayaquil, to Quito, runs through a very flat country for the first 55 miles. At this point the River Chancho has, where it crosses the railroad, 10 cubic meters of water per second at its minimum stage, and offers an excellent opportunity for the development of power for transmission to Guayaquil. There is 10,000 horsepower available, and it can be built for $75 per horsepower. Plans were made in 1908 for Guayaquil capitalists for a 60,000-volt, 5,000-horsepower hydroelectric installation for the purpose of street railroad, lighting, and power. Up to the present the matter is still pending. Coal is worth $12 per ton. The Guayaquil street-car system uses mules, and the electric lighting company uses steam.

MR. A. L. KENYON.

Prominent hydraulic and electrical engineer.

Guayaquil has a population of 75,000 and has very little manufacturing, but with cheap power it would be greatly stimulated and is much needed.

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[1] By A. L. Kenyon.

Peru is the next country south. It has many small rivers on the Pacific side, and, as it is a rainless coast, all of the water is employed for irrigation, so that very little of it reaches the sea except during the wet or flood season in the interior. Back from the coast from 30 to 50 miles, amongst the foothills of the Andes, there are many excellent sites for power.

The principal port of Peru is Callao. This city, together with Lima, the capital, 8 miles distant, and all of the surrounding country towns receive power and light from two hydraulic stations located at Chosica, 33 miles from the coast. The River Rimac at this point has at its lowest stage 14 meters per second. The combined capacity of the three stations of the United Electric Co.'s in water power is 12,000. There is also a reserve steam station at Lima of 3,000 horsepower.

PRELIMINARY WORK ON THE POWER CANAL AT CHOSICA, PERU.

Two hydraulic stations, located at this point, about 33 miles from the coast, supply the power and light for Callao, Lima, and all the surrounding towns.

Some 75 miles of traction lines, the lighting, public and private, and some 300 motors for manufacturing purposes are all operated by water power transmitted from Chosica at a voltage of 33,000.

This water is again used for irrigation purposes. There is still undeveloped from 50,000 to 60,000 horsepower.

The rate for power purposes is 2 cents per kilowatt hour, or $50 per horsepower year. This low rate has greatly stimulated manufacturing, there being over 3,000 horsepower used during the day. Coal is worth $11.50 per ton, and fuel oil from the Peruvian oil fields is sold at $12.50 per metric ton. The supply has considerably increased of late, and it is now being shipped to Japan and Argentina.

The famous Oroya Railroad from the seaboard at Callao to the mountains, climbing to 15,000 feet in a distance of 105 miles and with a grade of 4½ per cent, uses principally oil fuel in their locomotives. The operation of this road by electricity has been under advisement, but, up to the present, the traffic does not warrant the additional capital expenditure, estimated at $3,000,000.

The largest producing copper mine in South America is at Cerro de Pasco, one day's trip from Lima. This is owned by the Haggin interests of New York and produces copper at 8 cents delivered in New York and will soon be able to deliver it for much less. Having their own coal mines this fuel is used for all power purposes at present, although plans have been made to erect a large hydroelectric power station near there.

SECTION OF CHOSICA POWER CANAL, PERU.

Several other mining and smelting companies use hydraulic power in the interior of Peru and along the coast at Trujillo, Huacho, and at Arequipa. Over the Corderilla, on the Atlantic side, the rivers are large and long, but are too far away from a market for the sale of power at present.

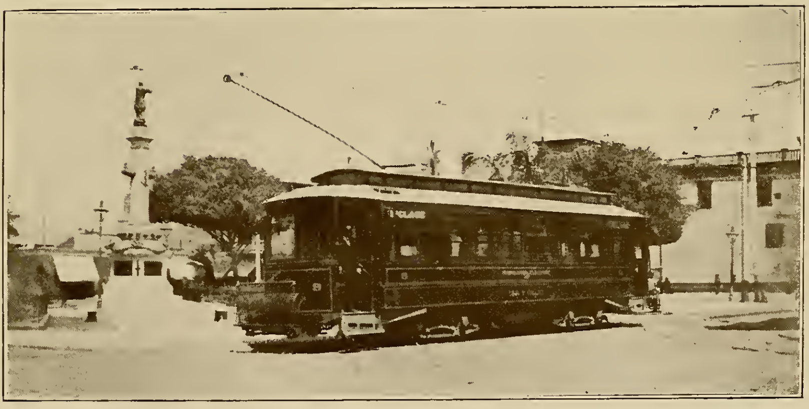
Going on down the coast we come to the desert district with the immense nitrate deposits of northern Chile. Here is a perfectly rainless district, and water is brought from the mountains at immense cost through pipes from 100 to 150 miles.

All fuel is brought into the country and is principally coal and crude oil, although a considerable number of kerosene engines are used for power purposes.

Chile has few rivers of any size, but numerous small ones that have considerable power possibilities, little of which is at present developed. Both the Aconcagua and the River Maipo, near Santiago, never having less than from 16 to 20 cubic meters per second during their dry season. These rivers are both tributary to Santiago, a city of

SCENE ON THE OROYA RAILROAD IN PERU.

This railroad from the seaboard at Callao to the mountains, climbing to 15,000 feet in a distance of 105 miles, uses principally oil fuel in their locomotives.

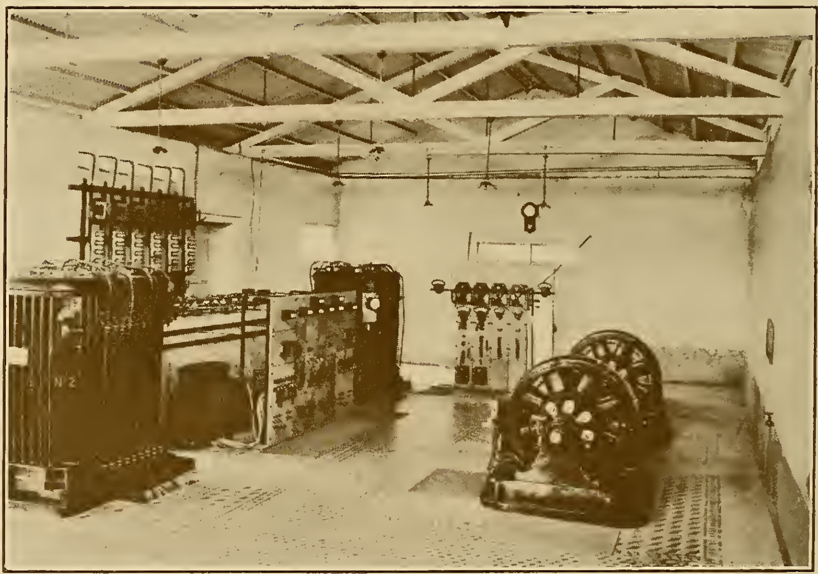


INTERURBAN CAR AT CALLAO, THE PRINCIPAL PORT OF PERU.

400,000 inhabitants. Up to the present all power for manufacturing purposes has been furnished from coal, costing $8 per ton.

The Chilian Tramway & Lighting Co., owned by English and German interests, have just finished a hydroelectric power station on the River Maipo, some 12 miles from Santiago. This has a canal some 8 miles long, and with a fall of 300 feet about 12,500 horsepower will be secured.

Four steel pipe lines lead from the forebay direct to the 3,000 kilowatt units. Three-phase current at 12,000 volts will be generated direct and conveyed through 12 underground cables to substations at Santiago, thus doing away with the use of transformers. As the Maipo, like all mountain torrential streams, carries large quantities of sand and gravel, trouble may be expected from this canal silting up, due to the low hydraulic grade that has been provided, it being only one-tenth of 1 per cent.

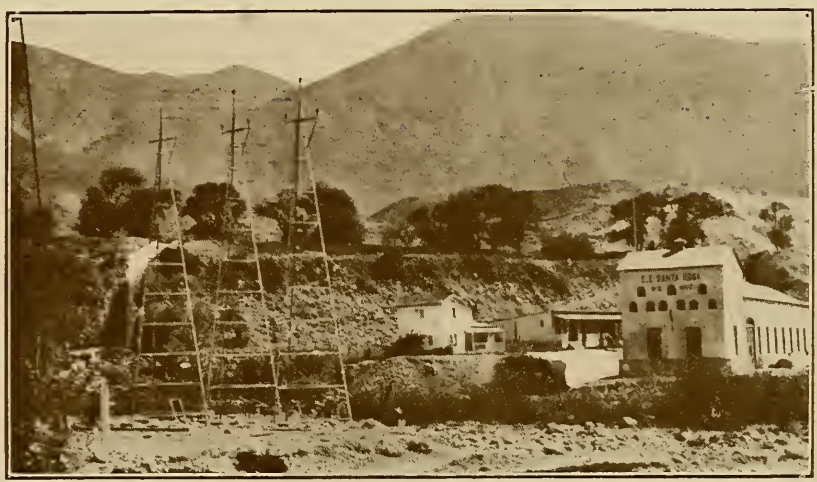


CALLAO ELECTRIC RAILWAY SUBSTATION AT LIMA, PERU.

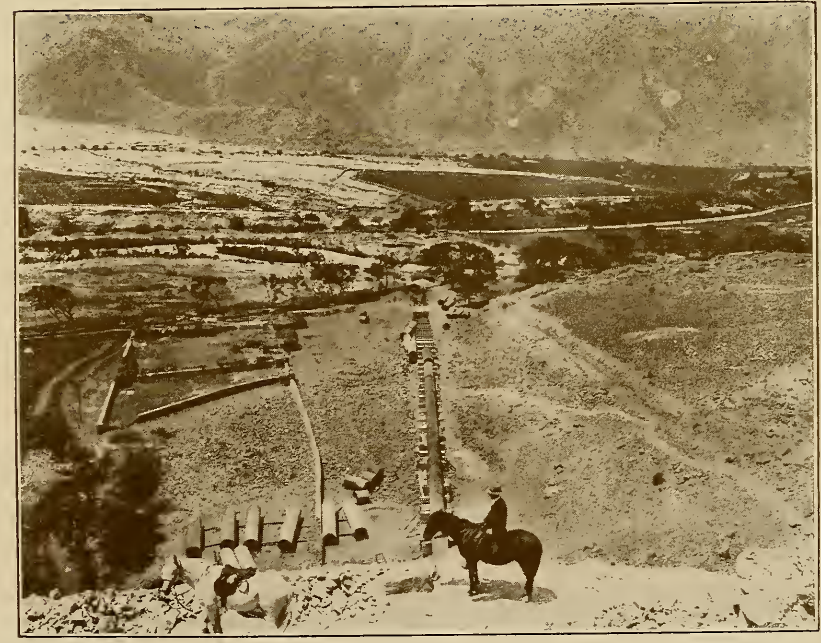
This plant is estimated to cost $2,500,000 or $200 per horsepower, a very high figure. It will take the place of their present steam plant, which has been using some 60 tons of coal per day.

Scarcely any electric power for manufacturing purposes is now sold, and shoe factories, flouring mills, machine shops, and other numerous manufacturing establishments all use coal. Coal is mined in the south of Chile, but carries a rather heavy percentage of ash. English and Australian coal is largely imported and mixed up with the native coal.

At the port of Valparaiso the Tramway & Light Co. use steam for all traction and lighting, requiring some 40 tons per day. A hydraulic station has been built, some 7 miles from Valparaiso, with



GENERAL VIEW OF YANACOTA POWER STATION, PERU.



BUILDING A PIPE LINE AT THE YANACOTA POWER STATION, PERU.

a head of 800 feet, using Pelton wheels, but through lack of water it has not been in operation for the past three years. It has been badly located, although the dam is now being raised and lengthened and it is expected that enough water can be impounded to carry part of the load during the peak.

Street-car service.—The passenger rate is very low on the street cars both at Valparaiso and at Santiago, being 2 cents for first class and 1 cent for second class. The cars are of the double-deck style and the top is used for the second class. From an American point of view the service is slow, due to the time lost in ascending and descending from the upper part of the car. In Santiago the cars are plentiful and run under short headway, but due to the above causes the speed is very slow.

PRESSURE TOWER IN ACTION.

This tower is located on a 3,000-foot pipe line at Lima, Peru.

Power for Government railroads.—Chile has nearly 2,000 miles of steam railways owned and operated by the State. The gauge is 5 feet 6 inches on the main section. These roads are now operated at a loss, but as the rates are very low the deficit could easily be made up by a slight increase of rates. As the principal cause comes from the high cost of fuel and the cost of maintenance of locomotives, the Government proposes to change from coal to electricity, abundant power being available throughout the greater part of Chile. For the purposes of arriving at a definite plan for the electrification of the State roads of Chile, an American syndicate proposes to furnish to the Government all of the power necessary for the operation of the first section. In this report it was recommended that the first section, from Valparaiso to Santiago, with a grade of 2½ per cent, be first shortened by building a cut-off from Limache, to Tiltil, 24 miles, thus lessening the distance from 111 miles to 80 miles and reducing the grade to 1½ per cent. This line was built many years ago and was badly located. The shorter line will require a tunnel of nearly 3½ miles, but does not offer any particular difficulty in the construction and is amply warranted by the great saving in grade, time, and cost of changing to electricity in the future operation.

Therefore, in order to demonstrate to the Government the feasibility and economy of electric operation against steam, it is proposed to first change the second section, from Santiago to the port of San Antonio, 68 miles long. This is a new line and has a 1½ per cent grade, and it is the intention to divert the heavy traffic from the first section to this shorter route to the capital. An excellent power site has been selected on the River Maipo for 20,000 horsepower in two stations, one of which is to be built first of 10,000 horsepower. A head of 250 feet can be secured. It is proposed to transmit this power eventually to Valparaiso both for the Government and also for sale to the public for manufacturing purposes, the voltage to be 100,000 and a total distance of 114 miles, 60,000 volts to be used at first for the second section and afterwards raised to the higher voltage when the first section is ready.

STREET CAR IN SANTIAGO, CHILE.

The passenger rate is very low on street cars both at Santiago and at Valparaiso. Two cents is the fare for first-class passage, and 1 cent for second class on the top of the double-deck cars. It is interesting to note that at Valparaiso women conductors are the general rule.

The matter is now being considered by the Government, and should the plans be carried out it will be a great economic advantage to the manufacturing interests of the country by reason of the cheap power offered.

At Rancagua the American Refining & Smelting Co. have installed a large hydraulic power plant for the operation of their copper smelter and mines. The River Cachapoal is used.

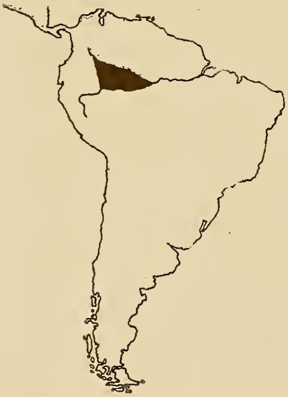
Some 30 miles from Conception the River Laja has a direct fall of some 200 feet and offers an excellent power site. The Government dry docks and works are located at Talcahuano, and this, together with the city of Conception, could use large quantities of power if it could be secured.

Aside from the three cities mentioned, the absence of a market is the limiting feature for the employment of hydraulic power at present.

IDYLLIC HOMES AND LIVES OF INDIANS IN SOUTH AMERICAN WILDS

INTERESTING EXPERIENCES OF A NOTED GERMAN TRAVELER AND AUTHOR.

WHEN, some years ago, the present writer projected a journey through the interior of Venezuela and Colombia, his friends, among them several natives of the two countries named, tried to dissuade him from the undertaking. After picturing to him the countless privations and dangers they were certain would be incident to traveling through the great wilderness, which constitutes the larger part of the Republics that border the Caribbean, they declared it would be tempting Providence to venture among the ruthless savages who inhabit the forests and llanos watered by the Orinoco and its affluents. So great, however, was his desire to visit this little-known part of the world that he determined, in spite of the difficulties and dangers predicted, to make at least the attempt to accomplish his long-cherished purpose.



MARKED SECTION SHOWS TERRITORY EMBRACED BY THE RIVERS NEGRO AND YAPURA TRAVELED BY DR. THEODOR KOCH-GRÜNBERG.

He has always been glad that he paid no heed to the horrible forebodings that were volunteered by well-meaning but ill-advised people. Had he done so, he would have deprived himself of one of the most delightful experiences of his life. For, outside of certain discomforts inseparably connected with roughing it in the wild, the entire trip was one of agreeable surprises and unalloyed pleasure. And, in lieu of bloodthirsty savages seeking to transfix him with poisoned arrows, he found the Indians all along his route to be not only harmless, but hospitable and obliging. Indeed some of the most pleasant recollections he has of his wanderings in the wilds of Venezuela and Colombia is the kindly treatment he invariably received at the hands of the children of the forest.

Nor was his experience in other parts of the Continent different from that in the north. As he was about to leave Lima for the Montaña of Peru—that vast woodland tract that lies to the east of the Andes—he was urged by one who had lived many years in one of the larger towns on the Amazon, to be sure to go well armed. "The country through which you will pass is infested with Indians and they are all a hard lot. The only way to be on the safe side is to shoot as soon as an Indian raises his head, no matter where you may see him."

In spite, however, of this and similar warnings, the writer started across the Continent, along the Equator, entirely unarmed, and never had he reason to regret what to many seemed foolhardy in the extreme. He met many Indians everywhere while crossing the Cordilleras, and traversing the dense woods of the Montaña, but like their brethren farther north, they were invariably of a kindly disposition and ever ready to do a favor, if at all in their power. They welcomed him to their humble abodes, shared with him their meager fare, and did all in their power to make him feel at home while in their midst. Any offering made them for their services was gratefully received, especially if it was some object of use or ornament. But the easiest and quickest way to reach their hearts was to show a kindness to their children, especially those of a tender age. This invariably proved to be an open sesame to everything desired.

(Photo by Dr. Theodor Koch Grunberg.)

DR. GRÜNBERG AND HIS YOUTHFUL ADMIRERS.

The distinguished German explorer and ethnologist showing his young Indian friends some photographs.

The foregoing observations have been suggested by a remarkable work which has recently been published in Berlin on the Indians inhabiting the region between the Rio Negro and the Yapura. It is by Dr. Theodor Koch-Grünberg, a distinguished German traveler and ethnólogist, and is entitled "Zwei Jahre unter den Indianern" (Two Years Among the Indians).[1] It has appealed to us in a special manner, not only on account of the mine of information it contains regarding the manners and customs of the various tribes of Indians which the author visited during his two years' peregrinations in this comparatively unknown part of the world; not only on account of its numerous and valuable illustrations reproduced from photographs which constitutes so valuable an aid to the right understanding of the narrative, but also, and chiefly, because the doctor's experiences among the red men of the regions visited were almost identical with our own in other parts of the continent.

So interesting, indeed, is the information contained in the really notable work in question, and so diametrically opposed is it to what has been published by certain recent writers, who have done little more than reproduce vague reports or caluminous rumors, that we feel that we shall be rendering our readers a distinct service as well as performing an act of justice to the much-abused Indians of the Rio Negro region, by giving a brief résumé of the author's experiences and the results of his noteworthy journey as described in the two admirable volumes which have afforded us such exquisite pleasure.

We have said that the region explored by Dr. Koch-Grünberg is comparatively unknown. We make this statement advisedly, for, as a matter of fact most of it has been classic ground for men of science for more than half a century. As early as 1831 it was visited by the Austrian naturalist, Johann Natterer. Subsequently it was traversed by the English scientists, Richard Spruce and Alfred Russel Wallace, both of whom made themselves famous by their collections and researches in this part of the world. At a still later date other explorers and naturalists achieved distinction here by their contributions to our knowledge of the fauna and flora of the country and by their interesting reports on the manners and customs of the divers Indian tribes who are the chief denizens of its extensive woodlands. Among these were the Italian traveler, Stradelli; the Brazilian botanist, João Barboza Rodrigues; the Austrian savant, Richard Payer; and the noted French explorer, Jules Crevaux.

We have said nothing of the explorers of the upper Rio Negro and of that strange natural canal which connects the basin of the Amazon with that of the Orinoco. They have been very numerous since Padre Romans, a Spanish missionary, first effected its passage in 1744, for since that time the frequency of intercourse between the two basins through the Cassiquiare by missionaries and men engaged in commerce and exploration has been so great that it, in the words of Humboldt, who made this passage, excites no more attention among the well informed than "the arrival of boats that descended the Loire by the canal of Orleans awakens on the banks of the Seine."

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[1] Zwei Jahre unter den Indianern, von Dr. Theodor Koch-Grünberg, verlegt bei Ernst Wasmuth, Berlin, 1909, 2 volumes, large 8vo, copiously illustrated.

We have been this explicit about the exploration of this part of South America because of the sensational reports that frequently, even to-day, appear in some of our newspapers and magazines. It is only recently we read of the Rio Negro being unnavigable except by canoes, when the fact is that a steamer of the Amazon Steam Navigation Co., equipped with all modern conveniences, including good commodious berths and electric light, makes a monthly trip up this river as far as Santa Izabel, a distance of 425 miles from its confluence with the Amazon. During high water small steamers ascend the river as far as Trinidad, nearly 150 miles above Santa Izabel.

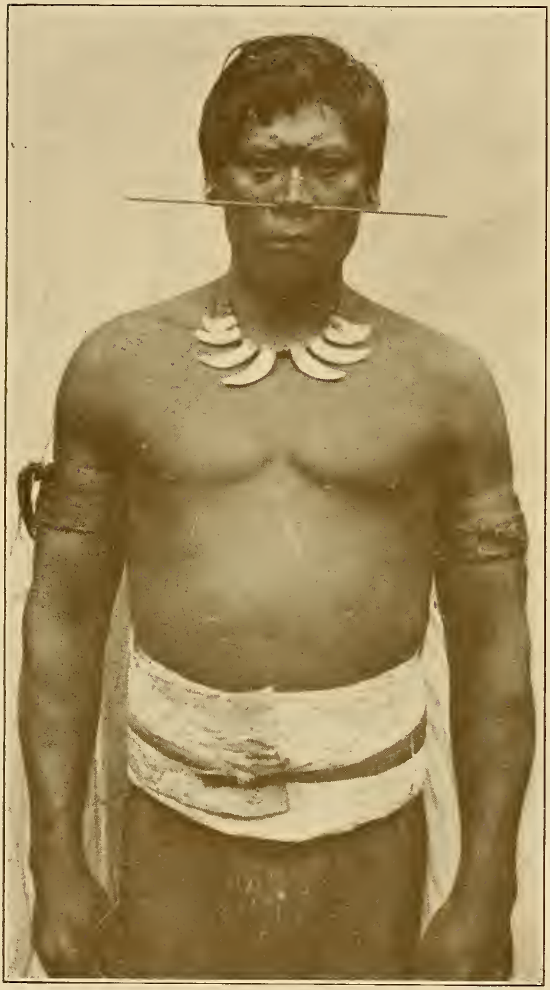
(Photo by Dr. Theodor Koch-Grunberg.)

A DIFFICULT PORTAGE.

A characteristic view showing the endless difficulties and the daily strain incurred in navigating the rapids of some of the upper Brazilian rivers.

More than this, we have been assured by certain writers, who should know better, that in these parts the heat is so intense that one can travel only at night, that the Indians are cannibals who greet the rash intruder into their domains with showers of poisoned arrows, and that until within a decade ago or less the country inhabited by these alleged savages had never been visited by a white man who lived to tell the tale of his adventures or of the existence of tribes so ignorant and so debased that they were unaware of the existence of fire or of the means of producing it.

How anyone could make such unwarranted statements after all that has been written about the country in question by such travelers as Humboldt, Schomburgk, and Michelena y Rojas, not to speak of more recent explorers, is something that passes our understanding. It shows either that these sensation mongers are ignorant of all that has been written by missionaries and explorers for nearly two centuries or that they are willing to lend themselves to the nefarious business of traducing an innocent and defenseless people.


(Photo by Dr. Theodor Koch-Grunberg.)

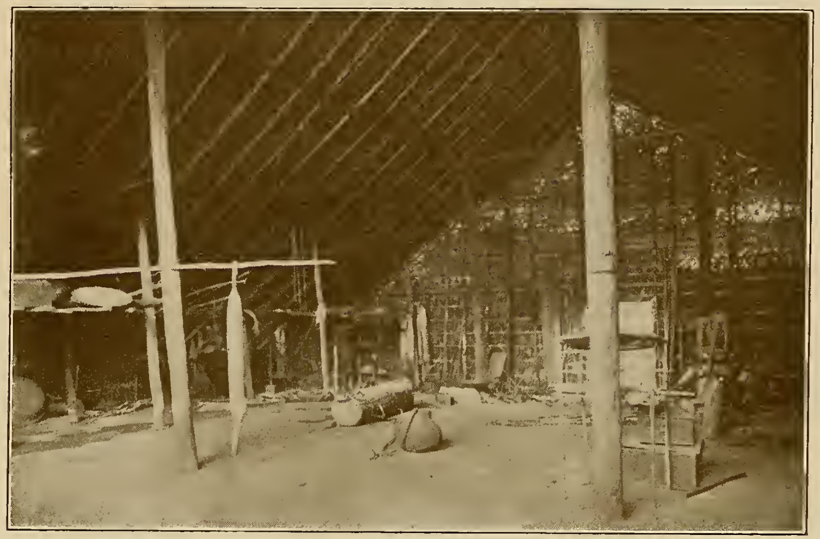
A YABAHÁNA INDIAN IN NATIVE COSTUME.

The nose stick is usually made of black palmwood and is about 30 centimeters long. The arm bands, which are made of a fibrous inner bark of trees, are never removed.

These preliminary considerations being premised, we are in a position to appreciate and enjoy the meritorious performance of Koch-Grünberg, who has given us one of the best and truest accounts of the children of the forest with which we are familiar. While breathing all the sympathy for the red man that is found in the noble pages of Catlin's North American Indians, it exhibits evidence of unquestionable sincerity and of his competence as an explorer and ethnologist, a competence that commands our unqualified admiration and confidence.

It was in August, 1903, that Dr. Koch-Grünberg reached the little town of Sao Felippe on the Upper Rio Negro. Using this place as a base, he proceeded without delay to explore its western affluents, the Icana, the Uapes, the Curicuriary, and their chief tributaries, and to study the manners, customs, and languages of the divers Indian tribes that live on or near their banks. After spending nearly two years among these people, some of whom never saw a white man before, he returned to Manaos, near the mouth of the Rio Negro, by way of the Yapura and the Amazon.

He was well equipped for his work, which for him was ever a labor of love. He had previously accompanied Dr. Hermann Meyer during his exploration of the Xingu in southern Brazil, and had then learned to admire the many noble qualities of the unspoiled denizens of the jungle.



(Photo by Dr. Theodor Koch-Grunberg.)

INTERIOR OF A "MALOKA" OF AN INDIAN CHIEF.

The large room in the center serves as a hall, where are celebrated the dance feasts. On either side, separated from each other by matting partitions, are the dormitories of the different families. On the walls, suspended from boards, hang the household utensils. In the middle of the room, hanging from the ceiling, is the "Tipiti," an implement used to extract the poisonous juice from the mandioca root. After treatment, the mandioca is used for bread making.

Outside of a young Brazilian, of German descent, his sole companions during his long wanderings among many tribes—some of whom, he had been warned, were antropofagos (cannibals)—were Indians whom he employed as porters and boatmen. And these were in most instances what are known as indios bravos (wild Indians) who had little or no contact with civilization. But so completely did he from the first win the confidence and affection of these simple, kindly people, that they at once treated him as one of their own and made him feel at home wherever he went.

And so considerate and just was he in all his dealings with them that his reputation preceded him from tribe to tribe. Everywhere he was known and welcomed as "the friend of the Indians" and any service they could perform for him was freely given. He lived in their malokas (communal homes), shared in their repasts and festivities, took part in their dances and their hunting expeditions, was a witness of their strange marriage and burial ceremonies, and romped with their children, helped to entertain their friends and guests. He had every opportunity of familiarizing himself with the peculiar manners, customs, traditions, and superstitions of his hosts, for they were ever willing to impart to him all the information in their power and assist him in his ethnographic researches in every way possible.

Besides treating them with justice and kindness, he made it a rule never to accept any service, however slight, without making some compensation for it. The remuneration offered might be trifling, but the effect was magical. They were all—men, women, and children—at his beck and call every hour of the day or night.

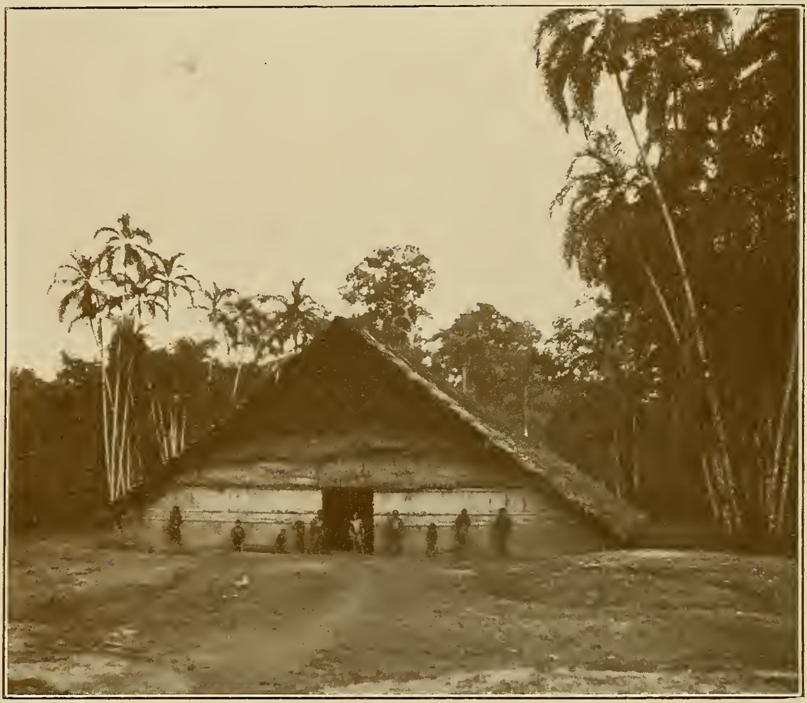
Nor did they count the hours of labor he required of them. If it was necessary for his boatmen to labor 18 hours a day, their service was as freely given as if it were 10 or 12. At times, especially in passing the numerous rapids of the various rivers, or while carrying the canoes around them, their work was arduous in the extreme, if not positively dangerous. But they never wavered in their devotion to him or complained of the tasks they were called upon to perform. For they knew that, when they reached the end of their journey, they would be liberally rewarded and that their wives and children would be made happy by the possession of some of the trinkets or gewgaws of which he was always provided with an abundant store.

The author's chief object in visiting the Indians of this region, aside from studying their languages, traditions, manners, and customs, was to make ethnographic collections among the various tribes. In this he was eminently successful. The process of securing the objects he coveted was always one of barter. No money was used, for gold and silver had no value to the people visited, except in so far as it could be hammered into objects of personal adornment.

As soon as he reached a village or a maloka he made known the objects which he desired to secure, and opening his boxes of wares he gave the Indians an opportunity of inspecting what they should like to have in return for articles desired of them. The women usually wanted needles, small mirrors, glass beads, or calico, while the men selected knives, fishhooks, and, in rare cases, for something particularly valuable, they demanded in exchange a rifle with a supply of ammunition.

After a great deal of parleying, an agreement was reached and both parties were satisfied with their bargains. The author never tried to cheat the natives or force them to take what they did not wish. The consequence was that his reputation for fairness preceded him, and the Indians knowing what he was in quest of were prepared for him on his arrival from one place to another. He then realized the truth of a statement made by Alfred Russel Wallace, his predecessor in these parts a half century previously, that "A pound's worth of fishhooks and 5 pounds laid out in salt, beads, and calico will pay all expenses for six months."

Of the Indians of Cururii (cuâra) the author declares that they did everything to make his sojourn among them comfortable and pleasant. "For a few glass beads and fishhooks they kept us liberally supplied with meat and drink. Fowl of European origin they provided us with in abundance. They themselves eat neither chickens nor eggs."



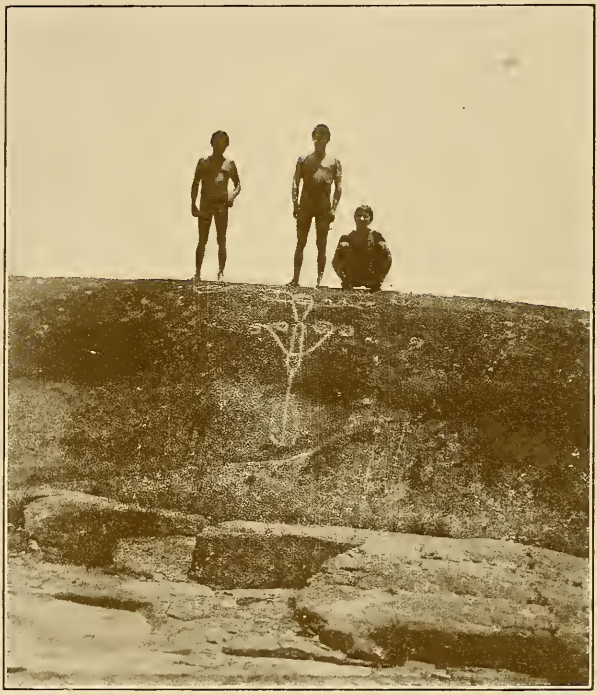
(Photo by Dr. Theodor Koch-Grunberg.)

A "MALOKA" INDIAN FAMILY HOUSE ON THE RIVER CAIARY-UPES.

These dwellings of the Brazilian Indians are made large enough to accommodate all the members of a tribe, frequently numbering 100 people. They are built near the source of a tributary to some fairly large river. The leaves of the Pupunka palm furnish material for the roofs, which slope almost to the earth.

The account that Dr. Koch-Grünberg gives of the homes and home life of the Indians of the interior is the best we have yet read, and is quite different from the erroneous reports circulated by those who have never had the opportunity of making the acquaintance of the children of the forest.

Their malokas or communal houses are quite different from the tepees or wigwams of our North American Indians. They are also, as a rule, much larger and more substantially constructed. Some of them are nearly 100 feet long by 40 or 50 wide and 25 or 30 high. The accompanying views give a good idea of the external and internal appearance of a maloka as well as the usual framework of the structure. It is ordinarily thatched with the fan-shaped leaves of the Caraná palm, and is quite rain-proof. A remarkable feature about the building is that no nails are used in its construction and yet it is strong enough to withstand the strongest tempests of the Tropics. Liana vines take the place of nails and bolts; and posts, beams, and rafters are so thoroughly bound together that the building is as safe as it is durable.



(Photo by Dr. Theodor Koch-Grunberg.)

ROCK INCISION MADE BY INDIANS.

Curious incisions are often found on the rocks along the banks of the Brazilian rivers. The Indians, who are unable to account for them, have a strange superstition that they were made by demons.

These communal houses, far from being abodes of filth, as usually supposed, are models of cleanliness. They are carefully swept every day and are, as the author expresses it, peinlich sauber (painfully clean).

The malokas are generally built on elevated ground, so that they may always be above inundations during the rainy season and near a stream of pure water. In front of them is a clear, open space, and near by are clumps of plantain and banana plants and pupuna palms, while in the immediate neighborhood are plantations of mandioca and fields of maize. These afford them all the food they need. But besides these sources of food supply, they can usually find an abundance of fish in the rivers and a choice variety of game in the forest. The mother looks after the mandioca, which is the Indian's staff of life in the equatorial regions of America, while the father procures the game and the fish.

"Life in one of these large commercial lodges," we are informed, "is, on ordinary days, of idyllic regularity." Long before daybreak its inmates are awake and, from hammock to hammock, carry on an animated conversation in a loud voice. This was often to my disgust, especially when I had worked to a late hour the night before, for, with all their chatter, further sleep was impossible. At early dawn, about 5 o'clock, all take a bath in the adjoining river. Soon thereafter the women call to the first breakfast. Each one puts in a large earthenware vessel the remnants, warmed over, of the preceding day's meal. This consists of boiled fish, strongly seasoned with pepper, or game, together with a shallow basket of mandioca cakes, placed in the middle of the house. The men now leave their hammocks, in which they ensconced themselves after their bath, and squat in a circle around the appetizing repast prepared for them. After eating, each one washes his mouth and hands in preparation for the dessert. Large calabashes, filled with refreshing and nourishing mandioca broth, are then passed around. The women, so custom requires, eat after the men. Then all betake themselves to their daily occupation—the men to hunting and fishing, the women to their plantations, and peaceful stillness reigns throughout the entire village. Only a few old women remain behind and swing themselves idly in their hammocks. From time to time there come from the river hard by the muffled voices of children who are splashing around in it, or from the top of an adjacent tree is heard the shrill cry of a tame parrot.

When the sun approaches the zenith, or the heat becomes too intense, the women return leisurely homeward, carrying a large basketful of mandioca roots, which is attached to a band that passes over the forehead and shoulders. The smallest child, which still requires a mother's care, is carried astride on the hip or reposes in a broad sling of red bast on the bosom of the mother, who shields the dear little head from the broiling sun by a small sieve or a banana leaf.

"Immediately after reaching home the diligent housewives prepare to cook the provisions they have brought with them. Soon thereafter the men return with the catch that has been yielded them by the fish-rich waters. The fish are cooked by the women with much pepper for the evening meal, which takes place about 6 o'clock. The scenes of the morning are repeated. Then the party, for a short while, takes a smoke and details the experiences of the chase and other light gossip. Soon after sunset the entire community betakes itself to their resting place for the night."

(Photo by Dr. Theodor Koch-Grunberg.)

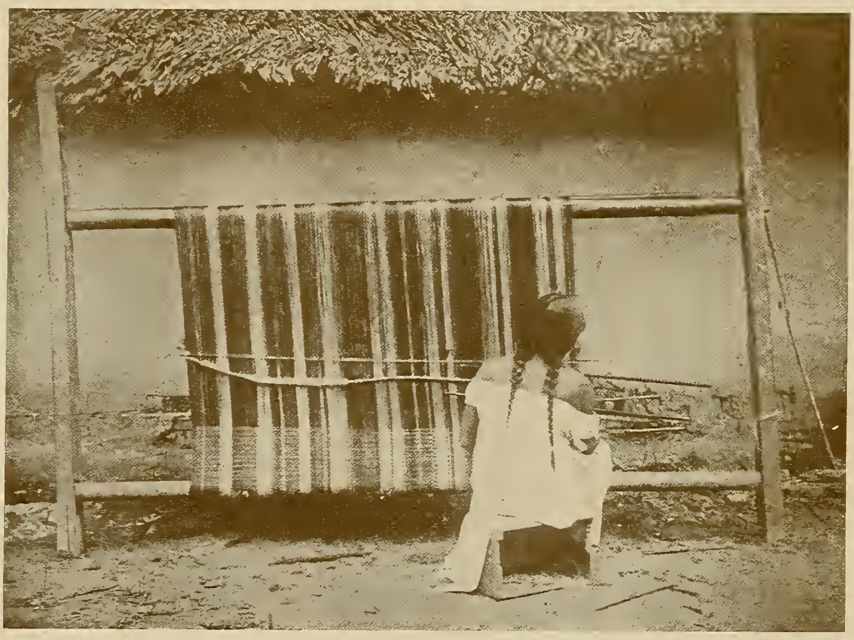
AN INDIAN POTTER AT WORK.

The art of pottery making has reached a high stage of advancement among the Indians of northern Brazil. It is practiced by the women only, who use a special kind of blueish clay mixed with the burnt bark of the caraifi tree. They roll the clay on a large wooden board into pads, which are laid one upon the other, and then shaped to the desired form. With a sharp stone the sides are smoothed and the pots then baked. The painting and decorating of these utensils often shows great skill and artistic taste.

Several families commonly occupy one of these malokas. In some of the larger ones there are at times as many as a hundred souls. The building is then partitioned off, and each family has its own furniture and hearthstead. The larger hall in the center of the edifice is used for a general reception room, for dances, and for the entertainment of friends and visitors. The chief or head of this patriarchal community lives, with his family, in an apartment at one end of the maloka. Everything is under his direction, and nothing of importance is undertaken without his consent and advice.

Notwithstanding the large number of people living under the same roof, there is the greatest peace and harmony. "I have lived for months at a time," declares our author, "in one of these malokas and never have I, under normal conditions, witnessed any disputes or quarrels."

It is, however, the moral conditions of the occupants of these communal lodges that impressed him most deeply. "These naked Indians," he asserts, "are as decorous as it is possible for men to be. Their morality is on a high plane, although several families live together in the same room." Conscious obscenity does not exist, nor is there anything which an Indian woman more abhors than obscenity in words and actions. Notwithstanding the very scanty apparel of the women, I never observed any act of impropriety on their part. Even those who were entirely devoid of clothing comported themselves so decently that one quite forgot their nude condition.



(Photo by Dr. Theodor Koch-Grunberg.)

UAREKÉNA WOMAN WEAVING A HAMMOCK.

For this work a very primitive loom is used and the weaving material consists of fiber of various species of the palm tree. The finished product is of far greater durability than that woven from cotton.

"Never once have I remarked even the shadow of indecent behavior on the part of married people in their relations toward one another, nor have I, under normal conditions, ever been a witness of those unseemly quarrels and disgusting scenes which in certain circles are, unfortunately, in our 'civilized' Europe so often the order of the day." Husband and wife are attached to each other and it is rarely that either one is unfaithful.

"The woman plays an important rôle as the wife and counselor of her husband, but her influence is greatly augmented when she becomes a mother. She then enters upon her proper life work, for the care and bringing up of the children are committed entirely to her unfailing love and devotion.

"From the moment of birth until it is able to walk one rarely sees the child without the mother. The two are practically inseparable. The 'baby' here is ever the object of the same tender affection as with us, and the older children, too, are never without their mother's special solicitude. I have seen a mother playing with and entertaining them for hours at a time.

"Nor will she ever permit anyone to treat them harshly or unkindly. On one occasion the author so far forgot himself as to reprove rather sharply a little boy that was playing at his feet for something he had done, when the mother, who was near by, read him a deserved curtain lecture for scolding a child that was not old enough to know what it was doing.

"The tender love that the mother has for her child shows itself in the way in which she decks it out with every possible ornament. The most beautiful necklaces, made from the teeth of animals, the seeds of plants, and laboriously bored stone beads, are for the smaller children. And in no way can one sooner make friends of the parents, especially of the mother, than by presenting the child with some beads, which are immediately threaded and placed around the little one's neck, to the applause and delight of the entire family.

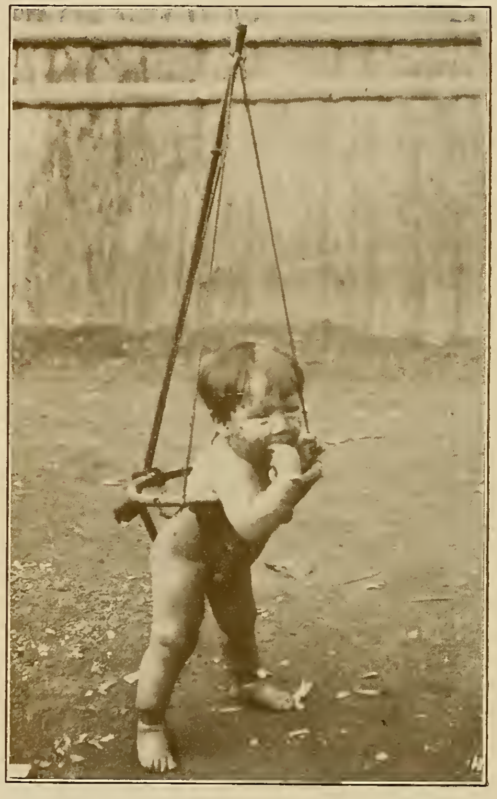
"The Indian woman is far from being the stupid beast of burden pictured for us by superficial observers. While the husband devotes his attention to the commonweal, the wife spends her time within the limits of the family circle. But along with the chief duties of the family she also assumes the chief rights. Her life is indeed one of toil and fatigue, but she thereby expands her faculties and brings her true nature to its full development. Her great intelligence is pleasantly united with genuine kindness, which is shown not only to the members of her family and tribe, but also to strangers who have won her confidence. We were treated by the women as members of the tribe. They never allowed us to run short of food and drink and were most thoughtful regarding whatever conduced to our well-being."

Of the wife of a certain Indian chief and her little daughter he gives us the following pretty picture:

"The chief's wife was a mother to me and the tender care she took of me was a source of great joy. It was not difficult for me to address the good old soul as 'my mother,' especially when I discovered what pleasure this epithet gave her and hers, and I must confess that I was equally well pleased when she called me 'my son.' Every morning, as soon as I awoke in my hammock, she sent her little daughter to me with a calabash of fresh water with which to wash my mouth and cleanse my teeth, besides many titbits and refreshing beverages. When I took my departure 'my mother' and 'my little sister' were missing. They had before daybreak gone to the plantation in order not to be present at the painful hour of parting."

What, however, excited the author's greatest astonishment was their extraordinary honesty. The Ehrlichkeit, he tells us, "war verflüffend." "I could have left all my trunks remain open and they would have taken nothing. Even pieces of printed paper which I had thrown away and bits of stearin that had dropped from my candle they always carefully placed on my camp stool.

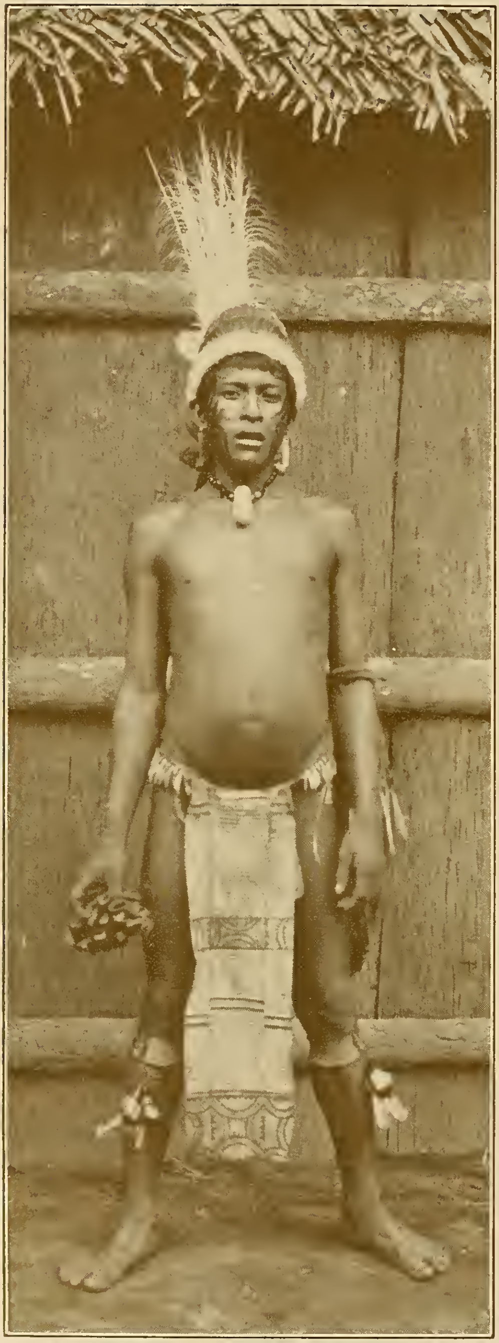
"Never was the least thing stolen from us, although my chests were occasionally left open. When we went to the upper Caiary the greater part of our belongings were left in Nomocoliba. The Tuschuaua, the oldest man of the place, had, before our eyes, a platform made on which were piled our chests and bundles. When we returned, a month later, we found our things covered with a thick layer of dust. Nobody had touched anything, although everybody knew what valuables—beads, axes, and knives—were stored there."



(Photo by Dr. Theodor Koch-Grunberg.)

AN INDIAN CHILD IN ITS HANGING CHAIR.

This convenient little chair is made of flexible wood and fastened to the ceiling of a room. The women of the Kobéua Indians are unable to carry their young about when engaged in their daily domestic duties, so they place the child in the chair, thus giving it freedom to sit or run about as it pleases.



(Photo by Dr. Theodor Koch-Grunberg.)

TUYÚKA INDIAN IN DANCING COSTUME.

Feasts with dances constitute the chief pleasures of the Brazilian Indians. They are generally of a religious nature and are held to celebrate such events as the birth of a child, the ripening of fruits, etc. At these feasts the dancers wear ornaments of rare feathers which are highly prized.

Speaking generally, the author does not hesitate to declare, "The property of another is strictly respected. Never will an Indian sell the smallest thing, while in his keeping, which belongs to another without the owner's knowledge and consent, and never will he accept payment for another."

It has been stated that thievery is unknown among the Indians of whom we are speaking. The author notes an exception. He was a man who had lived for sometime among the whites and who had become so civilized that he did not hesitate to steal.

Regarding the cannibals, against whom he had been warned when he was in Manaos, he assures us that "they were all as harmless and good natured as all the other wild Indians with whom he came in contact."

Having had such delightful experiences among these simple, kind hearted people, we can well understand that when the day of parting came the author found it difficult to tear himself away from those at whose hands he had for nearly two years received such unvarying kindness, and who had contributed so materially to the success of his really noteworthy expedition.

"The people," he tells us, "came from all the surrounding malokas to bid us farewell. In the village plaza, before the assembled throng, the chief pronounced a long eulogy on the departing guest, that closed with the pious missionary words of farewell, 'yasú tupâna irumo' (go with God). All accompanied us to the landing place. The women once more held out to me their children. Each one wished to clasp my hand. Rarely have I known so trying a separation."

In the vorwort to his charming work, after tendering his acknowledgments to those in Europe who had enabled him to undertake the journey, of which he has given us so graphic an account, Dr. Koch-Grünberg concludes as follows:

"Before all, my thanks are due to the natives of the country, the Indians. Far away from any European settlement, accompanied only by my servant, I traveled among these nude people in perfect security. I entered their villages unarmed, even when the inhabitants had never before seen a white man. Never did it enter my thoughts that they would meet me in a hostile spirit, and my trust was rewarded by trust. Their affection and loyalty protected me in many dangers and tided me through many gloomy hours that are ever incident to such a journey.

"The liberty-loving Indian at first naturally distrusts the white man, and not without reason, for in many cases it is with adventurers, the riffraff of other lands, the outcast of humanity, with whom they come in contact. So was it at the time of the conquest, so, alas, is it still in many parts of South America. But if the Indian, after associating with the white man, discovers that he wishes him well, his distrust vanishes at once, and his true lovable nature comes to the fore. He shows himself, as, under normal circumstances, he is in reality, a harmless child of nature, and, as a rule, requites the kindness of the white man with the fullest confidence.

"Hence comes it that the unprejudiced traveler, who does not look upon the Indian as an object to be exploited for his own selfish ends, but who regards him as a man, is sure to find him a man, and a man, too, of pronounced individuality. Never should we forget that aside from their various culture stages all men are animated by the same spirit, even though, under the influence of modern civilization, it is often difficult to understand the native mental process of the children of nature.

Menschen sind die Menschenkinder
Aller Zeiten, aller Zonen,
Ob sie unter Birkenbuschen,
Ob sie unter Palmen wohnen.[1]

We are well aware that the account Dr. Koch-Grünberg gives of the copper-colored denizens of the South American forests is wholly different from that of most writers. But he is not alone in his favorable estimate of them. Those who know them best, who have spent the longest time among them and have had an opportunity of studying them at close range, will find our author's descriptions and judgments correct as well as sympathetic.

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[1] The children of all ages and all climes are men, whether they live under birch trees or under palms.

But divergent as his experiences are from those of the majority of travelers, they are nevertheless quite in harmony with those we should expect from one who was willing to treat the Indian as a human being and not as a pariah or as a soulless brute. They are the same as those of the present writer in the llanos and montañas of Colombia and Peru; the same as those related by Dr. von den Stein in his elaborate work, Unter den Natur Völkern Zentral Brasiliens, who declares that "the idyllic days spent among the Bakiri Indians of southern Brazil were the happiest of my life," the same that Dr. Mozans narrates in his two recent volumes, Up the Orinoco and Down the Magdalena, and Along the Andes and Down the Amazon; the same as any traveler will have who will go among the Indians in a true Christian spirit, and as a practical believer in the fatherhood of God and the brotherhood of man.

(Photo by Dr. Theodor Koch-Grunber .)

DR. GRÜNBERG'S FLOTILLA HOMEWARD BOUND.

These Indian-made canoes resemble a dugout. They are reenforced with wooden planks nailed up the sides to give it more stability. In the back of the boat a latticework of wood and palm bast protects the traveler and his baggage.

How often have we, in reading Dr. Koch-Grünberg's delightful pages, longed for the day—as we frequently longed for it when we were the guest of the red man in equatorial wilds—when poet and romancist will avail themselves of the splendid material that, in the virgin forests of the Equator, has so long been awaiting the advent of the true literary craftsman. He will find here many Atalas, many Hiawathas and Minnehahas, who require but the kindly offices of a Chateaubriand or a Longfellow to introduce them to a world to which, up to the present, they have been utter strangers.

M. L. K.

NATIONAL INSTITUTE OF PANAMA[1]

IN July, 1911, the National Institute of Panama took possession of its new and commodious buildings, situated above the city on the eastern slope of the Ancon Hill. The new site is salubrious and overlooks the city and the bay. The buildings surround a patio paved with concrete, and are two and three stories high, embracing 23 class-rooms, physical, chemical, and manual training laboratories, a library, gymnasium, dormitories, dining hall, kitchen, offices of the administration, and the director's private apartment. The appointments for ventilation and sanitation leave nothing to be desired.

The façade is ornamented with sculpture and presents a noble appearance. The buildings have been three years in construction and cost $1,000,000 gold. Much equipment for laboratories, class instruction, and gymnasium apparatus is still to be provided, while the question of building or purchasing modern houses for the professors has already been raised.

DR. EDWARD EWING BRANDON.

Simultaneous with the removal to the present quarters, Dr. George Goetz, graduate of the University of Berlin, and for several years a teacher in the schools of Argentina, entered upon his duties as the new director. His appointment is for a period of five years. He has at once begun a reorganization of the schools. The primary course has been increased from five to six years. The same reform has been extended to all primary schools, urban and rural, of the Republic. This department is used in the Institute as an observation and practice school for the normal section.

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[1] By Dr. Edward Ewing Brandon.

The high school, entrance to which is through the primary department or by examination for boys coming from other primary schools, State or private, is divided into two cycles of three years each. In the lower cycle the studies are the same for all pupils, embracing the ordinary studies of these grades, English, history, geography, and penmanship.

The Institute has a good gymnastic hall, and physical training and military drill are regular subjects in the course of instruction.

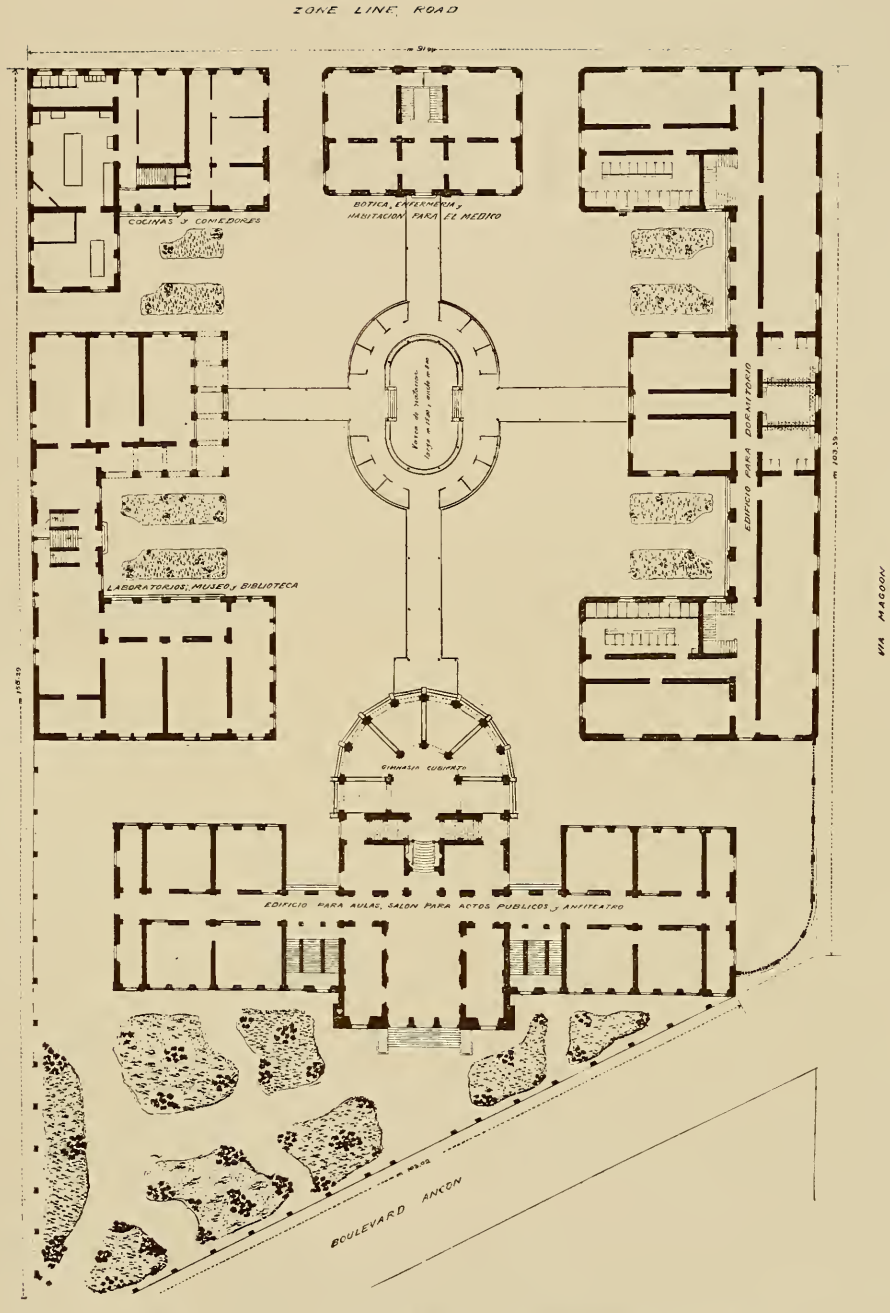
The upper cycle is divided into three courses, viz, letters, sciences, teaching. The first two will prepare fully for admission to universities or professional schools such as law, medicine, or engineering. The Institute formerly offered, in addition, commercial and mechanical courses; but instruction in the trades is now given solely at the National Industrial School, while the Institute confines commercial instruction to its night school.

THE NATIONAL INSTITUTE OF PANAMA.

The buildings of this institution have been three years in construction and cost $1,000,000.

This change in the commercial course is a questionable policy. The country has need of broad-minded, far-seeing men of business, and any movement that would direct fine talent away from the so-called learned professions, which are now crowded, should be encouraged. Panama will become an increasingly important commercial center and the national contingent should have an education that will fit it to take its rightful place and maintain its supremacy in the international competition that will develop in such an important world port.

The graduates of each course receive the bachelor's degree, corresponding to the baccalaureate of the French and Italian Lycea. At present the State does not intend to establish a school of university grade, but will continue to send abroad, on scholarships, for a university education, the most promising graduates of the Institute.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BOTICA, ENFERMERIA y HABITACION PARA EL MEDICO
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EDIFICIO PARA DORMITORIO
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VIA MAGOON
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GIMNASIO CUBIERTO
EDIFICIO PARA AULAS, SALON PARA ACTOS PUBLICOS y ANFITEATRO
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BOULEVARD ANCON

GENERAL PLAN OF THE NATIONAL INSTITUTE OF PANAMA.

Kitchens and dining rooms. Dispensary, pharmacy, and physicians' quarters. Dormitories.

Laboratories, museum, and library. Swimming pool. Dormitories.

Lecture hall, hall for public functions, and amphitheater.

In many respects the normal section is the most conspicuous and important of the Institute. When the State first seriously undertook the question of public instruction, the need of efficient primary teachers was a pressing problem. The Government asked for volunteers, agreeing to assume the entire expense of education, tuition, board and lodging, books, etc., of those who would contract to teach at least five years in the primary schools after graduating from the normal section of the Institute.

At that time, the period of study (above primary) was only five years. Twenty boys volunteered, and in February, 1912, this class, now numbering 18, will go forth to enter upon their five years' service. They are a serious-minded set of young men, fully alert to the responsiblities that will be theirs and the high duty they owe to the Republic.

While the method of procedure has been changed somewhat since this first era, scholarships sufficient to cover all legitimate expenses are still awarded to normal students, and in some cases, in other departments, where the boys come from parents who are unable to meet the expenses of educating them.

All graduates are required to serve the State one year in some capacity, if called upon, while for normal graduates the term is longer. The same is true in the normal school for girls. For this reason the normal section of the Institute is bound to remain the predominant feature in the schools.

Instruction in all departments is free, and for boarders the fee is $20 gold per month, which includes room, board, books, medicine and medical attention, with nursing when needed. A school physician is a regular member of the staff and visits the institution daily.

Four professors including the director give their entire time to the work of the institution. The whole corps of instructors numbers upward of 20, but aside from the 4 mentioned above, the professors teach part time in other State schools or are engaged in other professions such as law or medicine. This practice presents some serious disadvantages as it hinders the development of the best pedagogic principles and an esprit de corps that is invaluable to educational institutions.

CULTIVATION OF COTTON IN ARGENTINA

THE Pan American Union is in receipt of an interesting report on the possibilities of cotton cultivation in the Argentine Republic. This document was prepared and submitted, in May, 1911, by Mr. Juan S. Attwell, inspector of land and colonies of the department of agriculture of Argentina, and appeared as part of the Boletin Del Ministerio de Agricultura. It represents an expression of opinion on the advantages and opportunities for cotton culture in the Chaco Territory by Mr. Attwell, who has traveled extensively over the territory described and has given this question considerable thought and study. The subject is treated from a practical point of view, and is so comprehensive in its scope that the Bulletin takes pleasure in reproducing it herewith in its entirety.

Mr. Leroy-Beaulieu, in his work entitled "Les États-Unis aux XX Siècle," says:

> The cultivation of cotton remains, everything considered, very remunerative and which yields, at the average price of 9 to 10 cents per pound, a net benefit per acre superior to any other American culture. At the very high prices obtained lately (1904) of 14 and even 15 cents per pound agriculture in the Southern States of America would become enormously profitable. But such high prices, which have produced an increase in the area devoted to cotton culture, are they supposed to be permanent?

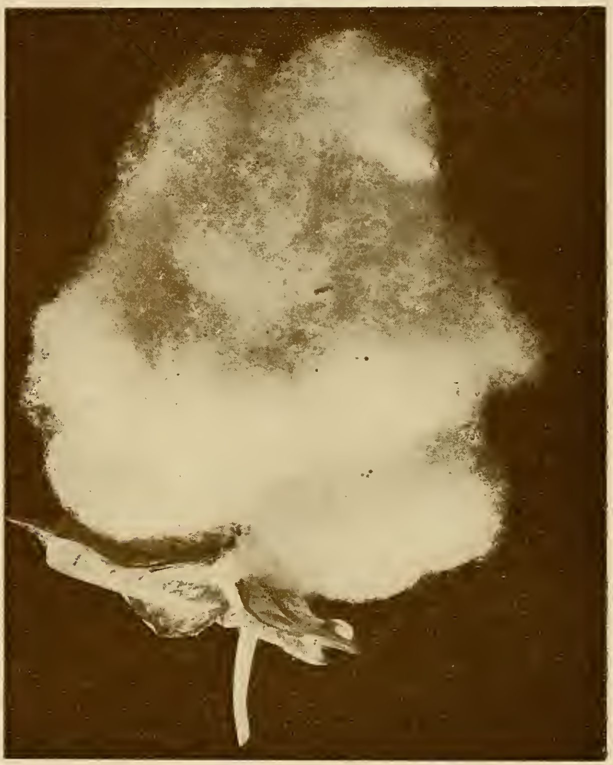
Although it is true that the area under cotton has increased somewhat in the United States, it is also certain that the world's demand for cotton has also increased in later years, and for this and other reasons prices instead of going down have remained quite high and to-day stand considerably above the average figures cited by the celebrated French economist. Cotton quotations, in fact, at the beginning of the present year (1911) passed the figure, very rarely reached before under normal conditions, of 15 cents the pound of seedless cotton, at the New York market, surpassed at the Liverpool market for middling cotton.

It is well known that cotton of better quality and of superior grades, such as are grown in the Argentine Republic, are quoted still at higher prices, which explains the fact that certain merchants have made money, by sending Argentine cotton to Liverpool, while the country imports raw cotton and cotton goods worth $40,000,000 gold per year.

The writer has taken samples of Argentine cotton to London, New York, and Washington, where experts have declared them first class in every respect, having also said without hesitation that such cotton surpasses in quality the greater portion of the American-grown cotton.

In connection with this fact of vast importance to the future of cotton culture in Argentina, I quote what follows from the book entitled "Cotton," recently published in America:

> Lower South America alone can compete with the South.
>
> Even more interesting is the opinion of the late Edward Atkinson, as given in an article in the Manufacturer's Record in 1903. During the Civil War Mr. Atkinson imported cotton from India, Egypt, China, west Africa, Peru, and Brazil, and his conclusion is that nearly all the foreign cotton is as unsatisfactory in quality as it is deficient in quantity. None of the countries mentioned, he says, have a congenial climate like ours. The Indian fiber is "short, rough, and unsuited to any but the coarsest fabrics." The Chinese fiber he found "only a quarter of an inch long"; the cotton from west Africa "wholly unfit for use as a substitute for American"; and he did not think Peru or Brazil could compete with the South. Summing up, Mr. Atkinson says that while he should like to believe otherwise, he was forced to the conclusion that the South would have a virtual monopoly for 50 years. "There is but one section of



AN OPEN BOLL OF EGYTPIAN COTTON.

The several species of Egyptian cotton are characterized by long and very strong fibers, smooth seeds, small, pointed, three-locked bolls, and yellow flowers. Some of them are second only to sea-island cotton in the length, fineness, and silkiness of their fiber. The great strength and high degree of twist allow the production of a very strong yarn in manufacture, and they bring a price second only to that paid for the highest grades of sea-island, being used solely in the manufacture of the finest goods.

the earth's surface where, in my judgment, there can be competition with our cotton States in growing cotton of equal quality, and that is on the high pampas of the Parana and Paraguay Rivers, sufficiently elevated to be free from tropical conditions, endowed with a soil of wonderful fertility, and capable of unlimited crops of cotton and wheat."

In corroboration of Mr. Atkinson's opinion a well-known agriculturist of the United States, Mr. Joseph E. Wing, who has very recently visited the country on a mission from the American Government, has also said:

> I have seldom seen such vigorous and productive cotton plants as those at the cotton farms of the Chaco. That rich black soil is alluvial and much like that of the Mississippi Valley in Louisiana, but more friable and easily tilled. Cotton in the Chaco seems to set an unusual burden of fruit and altogether to rival the best we have in North America.
>
> That is, indeed, a rare combination in the Chaco, soil and climate adapted to the orange, which almost grows wild, to cotton, and to several other things of profit, and withal an alfalfa-growing country, so that the problem of feeding the farmer's work stock is readily solved.

In regard to the world's demand for cotton it is also interesting to know the opinion of Mr. Wilson, Secretary of Agriculture at Washington, who says in one of his annual reports:

> It is estimated that of the world's population of 1,500,000,000 about 500,000,000 regularly wear clothes, about 750,000,000 are partially clothed, and 250,000,000 habitually go almost naked, and that to clothe the entire population of the world would require 42,000,000 bales of 500 pounds each. It therefore seems more than likely that the cotton industry will go on expanding until the whole of the inhabited earth is clothed with the products of its looms.

The world's production of cotton amounts at present to about 17,000,000 bales of 500 pounds per bale, so that it is easy to foresee that with the spread of civilization it will always be difficult to produce in the future more cotton than the amount required by mankind.

It is a matter of record the opinion expressed by Mr. Wu Tingfang, Chinese minister in Washington, who once said to Senator McLaurin, of South Carolina:

> If my people wore cotton like they do in America, and every Chinaman should add an inch to his shirt, it would consume the entire cotton crop of the South.

The United States, with the employ of powerful stimulants in the form of fertilizers, devote about 30,000,000 acres to the cultivation of cotton, while the Argentine Republic could easily devote an equal area in the northern Provinces and Territories, without the need of fertilizers, which enhance the cost of production. The question of labor remains, which in America was solved at first by the introduction of slavery with all its evils.

In regard to the Argentine Republic, I believe that it should be kept a white man's country, and that this is possible even if we should grow cotton at much greater scale than at present.

The favorable results obtained by Italian farmers in America and the magnificent example set by thousands of white farmers in the north of Argentina, and more especially in the Territory of the Chaco, who have started cotton growing without any previous knowledge of the matter, with exceedingly favorable results, clearly show that cotton planting is not a monopoly of other races, while it has shown, on the contrary, that it offers an opportunity to make a good living for our northern population, since the picking of cotton is done by men, women, and children, and all derive a profit in proportion to the amount picked.[1]

European farmers are doing most of the planting in the Chaco, but these farmers employ native Indians and peons from Paraguay and the Province of Corrientes when the time comes to pick the cotton, make the sugar, and gather the fruit and the maize harvest, not to speak of other valuable crops, such as vegetables and the fruit of the castor-oil plant, which is bought at the farms for use by an oil factory working in Resistencia.

The construction of new railroads has also operated in the sense of inducing more population to settle in the Territory, attracted also by the opportunity of acquiring fiscal or private lands at low values, so that given the progress already attained, the problem of populating the Chaco by the white race, as well as the peaceful and industrial conquest of the native Indians which still exist in reduced numbers, can be considered as settled.

Assuredly, if the Government could find a way to encourage in a practical manner the planting of cotton, for which the principal thing to do would be to take measures tending to facilitate the settlement of the large tracts of fiscal lands still awaiting the coming of the farmer and also to induce pickers to come at the time of gathering the crop, it would at the same time help materially to solve the economic problems that the northern Provinces and Territories are doing their best to solve by themselves.

The natural prolongation of the Province of Santa Fe, the railroads of which Province reach Resistencia and Barranqueras, the capital and the principal port of the Chaco, with probabilities to extend their lines farther north in the near future, this Territory is in condition to receive without difficulty either by the Parana River or through the railroad line the immigration which goes to Santa Fe and also the crop gatherers that go to the same Province only during harvest time, and who would also find remunerative work in the Chaco from February until May or during the cotton picking season.

The cutting of quebracho, the manufacture of tanning extract, and the establishment of sugar factories have been instrumental in attracting large amounts of capital, which yields very handsome dividends. On account of the establishment of the Pastoril colony, 200 square leagues of land, equal to 1,200,000 acres, have been occupied at once by settlers and their cattle, there being already a scheme afloat to put up a frozen-meat factory to utilize the large amount of cattle to be found in the Territory. The cattle and other industries will soon acquire much larger proportions on account of the proposed sale at public auction of not less than 400 square leagues of fiscal lands, equal to 2,400,000 acres, adjoining the National Railroad line now in construction from Barranqueras (Chaco) to Metan (Salta).

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[1] In North America some pickers gather as much as 350 pounds, or more than 150 kilograms per day, which at the rate of 4 centavos per kilogram, paid to pickers in the Chaco, represent 6 pesos per day, or $2.50 gold, which can also be gained by diligent pickers in Argentina.

BOLLS OF TRIUMPH COTTON.

As soon as this railroad reaches kilometer 205 (at present it runs up to kilometer 170), where it must establish a junction with a branch line of the National Central Railroad, which starts from Quimili, in the Province of Santiago del Estero, the communication by railroad between the northern Provinces and the deep waters of the Parana River, at Barranqueras, will be established, a fact which will have a great and beneficial influence in their development.

I have recently made several trips through the Chaco, having gone from Resistencia to Fortin Roca, on the Bermejo River, passing through the well-settled and flourishing colonies of Benitez and Margarita Belen, the camps of Echegaray, part of the Pastoril colony, and the Zapallar colony, where a great number of settlers are waiting for the land to be surveyed, as already decided upon, and granted to those who have made improvements on the lots occupied, returning afterwards by the Selvas del Rio de Oro and the prosperous and important colony of Las Palmas.

Another trip made was from Resistencia to Fortin Ganaderos á Caballo, crossing westward the colonies of Resistencia and Popular, the camps of Juan Penco, another large portion of the Colonia Pastoril, and the tracts reserved for quebracho cutting to the west of this colony; having also made the trip to the end of the line now in construction from Barranqueras to Metan, as well as from Resistencia to Buenos Aires by the Province of Santa Fe Railroad.

This is not the place to essay a description of the Chaco, nor to refer in detail to the points visited, but I feel I would not be doing my duty if I did not say at least that I found the quebracho men satisfied, the cattlemen pleased, and the farmers quite enthusiastic in all the region visited, since the Chaco offers admirable advantages for the triple exploitation of the forest, cattle, and farming industries.

In regard to cotton planting, which so far abounds more in and around the colonies of Resistencia, Benitez, Margarita Belen, and Popular, this year has found its way to the Colonia Pastoril and to the Zapallar colony, and is also to be found at Colonia General Vedia, and such are its advantages that the most far away planters are not frightened at the necessity of paying sometimes as much as 50 pesos the ton for transportation, cost of transportation which is, of course, reduced to 3, 4, or 5 pesos[1] per ton, for the large number of farmers who grow their cotton, within the above-mentioned colonies of Resistencia, Benitez, Margarita Belen, and Popular. The Government has this month decreed the establishment of a new agricultural colony adjoining the railroad from Barranqueras to Metan, where the problem of transportation is already solved.

The future of cotton culture is assured. The experimental state characteristic of all new ventures has been left behind and the natural drawbacks at the start have been forgotten. At present all well-advised farmers devote what land they can to the growing of cotton, which is to-day one of the most profitable pursuits in the country, as it is in the United States, owing to the high prices prevailing now (May, 1911), when middling cotton is quoted at 17 cents per pound at Liverpool, precisely when the Argentine crop is coming to an end and before the American crop can possibly start, since it only begins in August, a circumstance which will always work in our favor.

The methods of cotton culture can be found in any work dealing on the subject and particulars can also be obtained by writing to the

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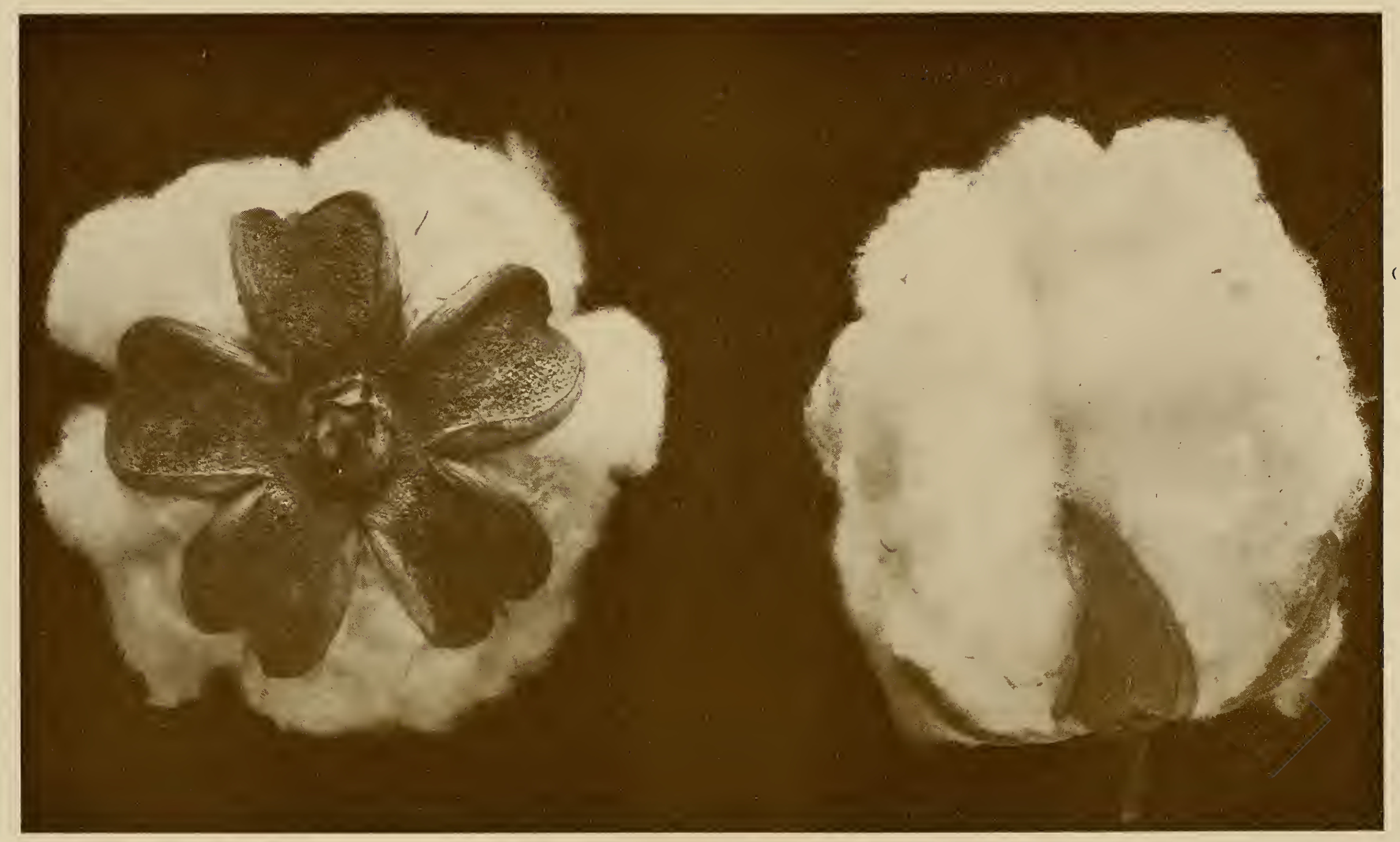
[1] An Argentine paper dollar or peso is equal to 44 cents gold.



TRIUMPH COTTON.

National Agricultural School, Colonia Benitez, Chaco, so that I will only say here that it presents no difficulties of any sort and that in the Chaco the seed is generally sown at the beginning of October, and the picking starts four months afterwards and lasts until the end of May, when killing frosts are liable to fall, a fact, however, which does not always take place, since the frost is also liable to come later in the year, and the picking can then go on for a month or two longer.

This year the yield has varied from 1 to 3 tons of seed cotton per hectare, according to the quality of the land and the more or less care devoted to the plantation, so that it is not much to assume an average yield of 1½ tons, or 1,500 kilograms, per hectare, the hectare being equal to 2.40 acres.

The price of seed cotton at the ginning plants, of which the majority are to be found in Colonia Benitez, stands at 23 centavos per kilogram, or 230 pesos per ton, so that the gross return to the farmer for a hectare sown with cotton amounts to 345 pesos, or a little over $60 gold per acre.

The cost of picking, at the rate of 4 centavos the kilogram, for 1,500 kilograms, comes to 60 pesos, and if 40 pesos are added for rent and cultural expenses, a net benefit of 245 pesos per hectare is obtained, from which can be deducted, for pessimistic reasons, another 45 pesos, leaving always said benefit standing at 200 pesos per hectare, or in round numbers $40 gold per acre.

When the farmers themselves, with the help of their own families, plant, cultivate, and pick the cotton, it can be truly said that instead of reductions, notable increases are certain to be obtained in the yield and in the benefit per acre.

At all times a farmer can carry a load of cotton to the nearest country grocery feeling sure that it will be bought from him at prevailing prices and paid in cash, which is not always the case with other products.

In regard to the ginning plants, their business consists in separating the fiber from the seed and selling them in the Buenos Aires market, where prices this year run as high as 900 pesos for the ton of fiber and 60 pesos for the ton of seed, or $390 gold for the first and $26 gold for the second.[1]

Applying these figures and knowing that 1,500 kilograms of seed cotton will yield 1,000 kilograms of seed and 500 kilograms of fiber, we find that the average gross value of the yield of a hectare planted to cotton, amounts to 510 pesos, or $90 gold per acre, a value which can be obtained by any planter running a cotton gin at his own expense.

In the latter case, and buying the cotton from the neighbors, the business would still be more profitable, but under all the circumstances it has been shown that it is good enough to tempt the most exacting minds.

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[1] The cost of transportation by river boats from Barranqueras to Buenos Aires is never higher than 14 pesos for the ton of fiber, and 10 pesos for the ton of seed.

Since Mr. Leroy-Beaulieu said that at the high prices of 13 and 14 cents per pound (which, as already seen, have risen lately to 17 cents per pound), agriculture in the Southern States of America would become enormously prosperous, a phenomena has accentuated itself which tends to depress it, however, and which is at the same time the principal reason why cotton prices are kept high and increase year after year.

This phenomena is caused by the presence of the terrible and destructive boll weevil, which, coming at first from Mexico, has already covered most of the cotton land west of the Mississippi River. It crossed this river several years ago and is now making its way toward the Atlantic, so that it is only a question of a short lapse of time when all the cotton belt of the United States will be ravaged by the boll weevil.

Against this plague no remedy has yet been found, a plague which produces a reduction of over 40 per cent on the current yield of cotton, and which is calculated to cause a yearly loss of more than one hundred millions of dollars to the American planters.

For these reasons it would not be strange if some enterprising farmers of America, once they knew the advantage to be derived from growing cotton in Argentina, should come to try better fortune in this new and promising field.

Humanity has always found a way to satisfy its needs and its wants, and it is permissible to think that as soon as her leading minds grasp the fact that it suffices to push the plow into our soft and fertile lands of the North to produce the textile which, in union with our wool, can clothe millions of men and women—it is permissible to think, surely, that once this fact is known throughout the world, there will be no lack of enterprising and hardworking men necessary to turn those regions of healthy and agreeable climate into a new El Dorado. And in the near future, when this country shall have increased its wealth tenfold, perhaps some writer will be able to say, as Carnegie has said of America: "The greatness of Argentina is due to cotton."

THE RIVER HEATH

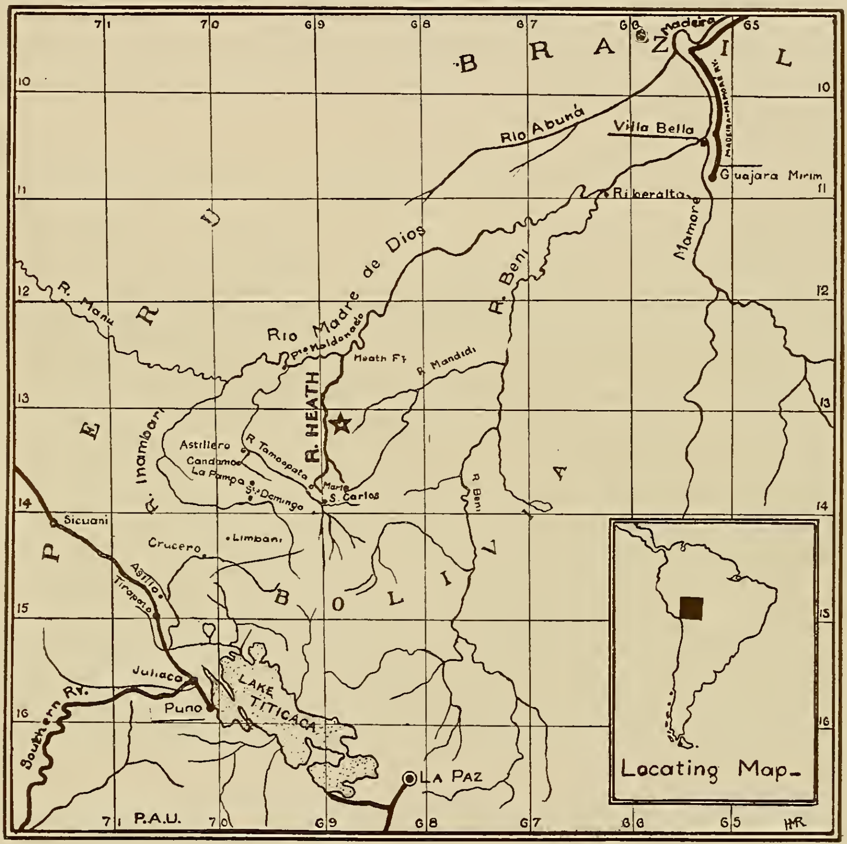
THE River Heath (el Rio Heath) is found on only a few maps, even in the best atlases and geographies. The region through which it runs is in the heart of South America, where three great Republics come close together, and where there is still chance for exploration that can warm the heart of the adventurous. Brazil, Peru, and Bolivia are all interested in the country traversed by this strange river, and the future promises great things for its drainage basin. In fact, the River Heath forms part of the new frontier of Peru, and is the dividing line between Peru and Bolivia. It has been called the "Abuyama River," but other titles are attached to it from fanciful or traditional geography, and even yet the river, by any name, carries a certain terror to the natives who live along its banks.

EDWIN RUTHVEN HEATH.

Dr. Heath, in whose honor the River Heath in South America is named, made extensive explorations in Bolivia and Brazil in 1880 and 1882. He is now living in Kansas City an active life, and has always retained his love for and interest in Latin America.

This portion of the southern continent is almost the only part left for the seeker after the unknown. In 1910 it was visited by a well-organized expedition, and even then its primitive isolation had not been changed. Unfortunately the name of Heath, as given to that particular river, has been erroneously traced "to an English explorer killed there by savages," whereas in reality it was a German explorer, Felix Muller, who lost his life there, and it was an American, a learned Yankee, as the Peruvians called him, who, practically alone, explored, charted, and scientifically described much of this mysterious region, and in whose honor the country named this hitherto unknown stream the River Heath.

The River Heath empties into the Madre de Dios at 12° 30′ south and 68° 44′ west (Greenwich), after flowing almost due north for something over 100 miles. It is probably the best way of leaving the eastern slope of the Andes from Peru, as the stream, although possessing many rapids during its course, is not as a rule choked by rocks or dangerous impediments of that character. Its importance in that respect is recognized, and since the official work of Maj. Fawcett in 1910, when this river was selected as part of the boundary between Peru and Bolivia, it has assumed greater significance in the public eye.



THE POSITION OF THE RIVER HEATH.

The heart of South America is still relatively unexplored and to a great extent unknown. The River Heath is of decided importance, as it runs through this rich and promising country and is developing into a highway along which commerce between east and west must flow.

On its water must develop an immense traffic as the adjacent country is opened up and when the rapidly building Madeira & Mamore Railway is completed; still greater must be its value when the Panama Canal is finished. Therefore the reason for its name should be understood, and honor should be done to the intrepid explorer who ventured into this region when it was as mysterious as at the times of the Incas and the Spaniards who conquered them. In England (Proceedings of the Royal Geographical Society, new series, Vol. V, meeting for Apr. 9, 1883) the accomplishments of Dr. Heath have received due credit, but in the United States less justice has been done him. It is consequently a pleasure for the Pan American Union, through its BULLETIN, to refresh the memory of its American readers in this regard, and to tell the story of one of the heroes of the country who has done so much to perpetuate the friendship binding the two continents together.

Dr. Edwin Ruthven Heath, after whom the River Heath in South America is named, is still alive and practicing his profession of medicine in Kansas City. He was born in Janesville, Wisconsin, July 13, 1839, but during the gold fever in California he went west in 1848, passing that winter in Savannah, Missouri, and reaching Sacramento on October 15, 1849.

Determined to have a college education, he went to Beloit College, from which he was graduated in 1861, and studying medicine afterwards, he was given the degree of doctor of medicine by the Homeopathic Medical College of New York City in 1863.

Six years later, when Dr. J. P. Root was appointed minister to Chile, Dr. Heath accompanied him as secretary of legation. One of the first adventures of the members of the legation staff was to cross the Andes into Argentina by the Uspallata Pass, a hazardous proceeding in 1870, but they surpassed that by returning to Chile by the Portillo Pass at an elevation of 13,300 feet. Soon after this Dr. Heath was sent to the Caracoles silver mines, 110 miles due east of Antofagasta on the Pacific coast, his mission being to collect ammonite fossils for Prof. Agassiz and to make topographical sketches of the district.

Dr. Heath was shortly afterwards offered and accepted the position of surgeon in chief of the Pacasmayo Railway, to run from the Pacific into the Department of Cajamarca, as part of the system of railways then under construction by Henry Meiggs.

In 1878 he returned to the United States to prepare for exploratory work, his objective point being the Beni River. In 1879 he went to Para, Brazil, ascended the Amazon and Madeira Rivers to San Antonio, where the early attempts to build the now almost completed Madeira & Mamore Railway were then active.[1] He remained there in charge of the medical department and in association with another American distinguished in South American annals, George Earl Church, until work was suspended in August, 1879. He then ascended the Madeira River to Exaltacion and Santa Ana, on the Yacuma River emptying into the Madeira, and crossed the pampas to the town of Reyes, close to the Beni River, in Bolivia.

Dr. Heath remained in Reyes to study the Indians and to make his plans to descend the river, a feat that had been considered hitherto impossible. Even the rubber traders were at that time accustomed to transport their stocks up the Beni, to rearrange them at Reyes, and to have them carried down the Madeira, although by this circuitous route almost double the time and distance were consumed. Reports of the dangers of the Beni were general; attempts had been made to ascend it from its junction with the Madeira, but had failed; the natives of all classes declared the trip practically self-destruction. But after several preliminary trips of investigation the actual journey was begun.

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[1] Existing conditions, with remarks on Dr. E. R. Heath, p. 406, are to be found in the "Recollections of an Ill-fated Expedition," by Neville B. Craig, Lippincott Co., 1907.

The voyage down the Beni River commenced on August 6, 1880. The adventures, mishaps, accidents, and good luck of this intrepid explorer could fill a volume. He passed through the region already entered by hardy traders and then into the unknown. The mouths of many rivers were accurately located, and other scientific observations were made. Meanwhile all his Indian companions had deserted him, until only two native boys were left, but they were brave and faithful, remaining by him to the end. One river was named Ivon after Dr. Heath's brother, another Orton, after Prof. James Orton, also a famous South American explorer. On October 8, 1880, was located the mouth of the wonderful Madre de Dios River with which the Beni really unites. Up this stream, which had seldom been traveled, and joining its waters with the greater "Mother," is the River Heath, which the explorer himself was destined never to see. The unknown was almost over now, and with a few more adventures the leaking,

SHORE OF THE RIVER HEATH.

To-day this river has lost the solitude of a generation ago. There are tribes of native Indians on it still, but gradually it will be utilized for the growing commerce of the rich interior of South America.

primitive, and crowded canoe passed into the Madeira River on October 11, 1880, having accomplished what had never before been recorded.

The little expedition returned to Reyes by ascending the Mamore, a distance of 325 miles, to Exaltacion, which was reached on November 5, finally arriving at Reyes on December 11, 1880. The results of the exploration were at once evident. Mysterious horrors were dissipated; a practical route from the rubber territory of the interior was developed, and trade was expanded a hundredfold within a year.

PRIMITIVE CANOEING IN SOUTH AMERICA.

One of the mysteries of exploration is that so many hardy adventurers escaped from the danger of navigating these treacherous inland rivers and brought back with them accurate information of what they saw and found. Dr. Heath descended the Beni River in a dugout, the conditions being as primitive as could be described, yet his data stand the exacting test of to-day. But the description of the boat must be given in his own words:

"In the stern sat Ildefonso with his paddle. In the bow sat Sebastian, while the center was occupied by our oxhide of farinha projecting some 15 inches above the boat. I sat behind this with compass, paper, and pencil, alternately using my paddle and pencil. When we were all in the boat we were only 4 inches above the water. The boat was 15 feet long by about 4 feet wide, water-soaked, partly rotten, cracks being calked with corn husks and pitched with clay."

In 1882 Dr. Heath began the ascent of the upper stretch of the Beni River, a rather well-known and traveled route, however, but he wished to demonstrate that the whole river from its mouth in the Madre de Dios to its origin, not far from La Paz, was available. He was successful in this as in the previous trip, and arrived at La Paz in safety, having been from April 26 to July 25 on the trip. The Bolivian Government received him with expressions of gratitude for what he had accomplished.

Dr. Heath, after this last expedition, returned to the United States and resumed the routine practice of his profession. He now lives in

Kansas City, Kansas. In addition to his medical work he has the position as consul for the Republic of Nicaragua, as well as for the Republics of Guatemala, Honduras, and Boliva. He is still a vigorous, hearty man, keenly enjoying life and glad that his early years could have been devoted to such a worthy cause, in which he himself derived such pleasure.

The River Heath is now, as has been said, the boundary between Peru and Bolivia. East of that river, from the Andes to the Beni and Madre de Dios, are some 35,000 square miles. This country forms an extensive triangle, in the south of which are meager trading and mission villages, to the north are a few rubber settlements, but the vast stretches between these extremities are unexplored and peopled by savages. That was the case even in the days of the Incas, and those sturdy inhabitants of the mountains pushed an expedition into this tropical wilderness, only to meet defeat quite as much through climate as otherwise, but they left their trace in unlocated fortresses and plainly evident roads. This region rivals that of the plateau of Santa Fe de Bogota in Colombia as the home of the mysterious gilded man (El Dorado), and many brave but foolhardy adventurers have lost their lives in the search for it.

Maj. P. H. Fawcett, of the British Army (The Geographical Journal, April, 1911), explored some of it in 1910 while establishing the boundary line, but even he asserts that there still remain at least 10,000 square miles into which it is believed no white man has ever entered. These forest areas were in earlier times thickly populated, but they are to-day almost deserted except for the few remaining Indians who, rendered suspicious by the long-continued aggressions of rubber exploiters and trading adventurers, maintain an effectual campaign against further exploration. Yet this hostility is not deep seated; it can be overcome and their emnity turned to friendship by honest, fair, and fearless treatment of them. These native wild men are clever, their knowledge of their forests is profound, and when they are finally made to trust the white man it can be utilized most effectively to the advantage of scientific investigation.

This fascinating field is the region toward which the River Heath promises to be the highway. It is still full of the early but disappearing romance of the original conquistadores. The edges of the Andean slope have abundant gold; the whole country is rich in rubber, in the resources of the untrodden Tropics, in the innumerable diversities of animal and vegetable life; in all those phases of the unknown which stimulate man's curiosity and ambition to such a wonderful degree, distinguishing him thereby from the unproductive savage. The English, German, Spanish, and indeed the Bolivians, Peruvians, and other inhabitants of the mountain plateaus have accomplished much to break open the barriers of this mysterious wilderness, but practically the very first white man to demonstrate the possibility and the value of reclaiming this peculiarly isolated region of South America was a native of the United States, Dr. Edwin Ruthven Heath.

THE BETTER CLASS OF BOATS USED IN THE AMAZON BASIN.

The little boat in which the Indian is seated is like the one used by Dr. Heath on some of his exploring expeditions.

Below is quoted an extract from Dr. Heath's observations which shows how close was the division between life and death on one of his experiences. They were proceeding upstream, with all their possessions in the one little boat, and came to a series of rapids:

"Ildefonso had the bowline, Sebastian the stern line, and I was in the water to keep the boat from the rock. Ildefonso, when he was on the projecting rock, becoming bolder, began to pull and we could not hold the boat. As soon as the boat struck the fall it reared and then plunged out of sight. Fortunately I caught the stern line and took a couple of turns around a bowlder, and thus we drew it to the shore, but our paddles and oxhide of food were in the whirlpool. When the current, turned by the projecting rock, rushed against the opposite shore, it would crest over, and falling would flow back and fill the hole in the whirlpool; then the hole would re-form and my oxhide and paddles would disappear.

"While my Indians were bailing out the boat, I divested myself of clothing, started for the whirlpool, and when about halfway my Indians saw me and cried out in horror, 'Come back! for God's sake, come back!' but I kept on, watching the reappearance of the oxhide. As soon as it came to the surface, I caught hold of it, swimming and pulling so that we reached the edge of the hole, but the look into the pit was terrifying, indeed. Once far enough from the hole I got behind it and pushed it ashore. After my Indians had received the oxhide I was carried three times round before I could land. Resting, I returned and brought my two paddles. The thin paddle being freshly made sank like iron. I looked around to see how I could get another. All our axes and machetes being at the bottom of the river, I could not cut down a tree to make one. Fortunately I found a log in proper length for a paddle, but cracked. This I rolled into the fire and charred it, and scraped off the charred part with a stone, and again burned it. In time I had a paddle."

LATIN AMERICAN FOREIGN TRADE IN 1910—A GENERAL SURVEY

General foreign trade of Latin America for 1910.

Countries.	Imports.		Exports.		Total foreign trade.	
	1909	1910	1909	1910	1909	1910
Mexico [1]	$78,266,513	$97,432,891	$115,550,309	$130,023,135	$193,816,822	$227,456,026
Guatemala	[2] 5,811,586	[3] 5,251,317	[2] 6,756,143	[3] 10,079,219	[2] 12,567,729	[3] 15,330,536
Salvador	4,176,932	3,745,249	6,785,430	7,297,836	10,962,362	11,043,085
Honduras [4]	2,581,553	3,019,416	1,990,601	2,571,916	4,572,154	5,591,332
Nicaragua	2,958,879	2,583,257	3,647,984	3,989,428	6,606,863	6,572,685
Costa Rica	6,307,034	8,152,501	8,440,007	8,644,505	14,747,041	16,797,006
Panama	8,756,307	10,056,994	1,502,475	1,769,330	10,258,782	11,826,324
Cuba	91,447,581	103,675,581	124,711,069	150,909,020	216,158,650	254,584,601
Dominican Republic	4,361,428	6,408,838	8,562,771	10,924,371	12,924,199	17,333,209
Haiti [5]	[2] 4,701,160	[3] 5,880,678	[2] 17,399,240	[3] 11,008,483	[2] 22,100,400	[3] 16,889,161
Latin Republics in North America	209,368,973	246,206,722	295,346,029	337,217,243	504,715,002	583,423,965
Argentine Republic	293,673,412	341,217,536	385,430,012	361,447,274	679,103,424	702,664,810
Bolivia	14,405,407	18,135,000	24,868,142	29,080,957	39,273,549	47,215,957
Brazil	179,690,125	235,574,837	308,331,829	310,006,438	488,021,954	545,581,275
Chile	95,660,208	108,582,279	111,846,917	120,021,919	207,507,125	228,604,198
Colombia	12,117,927	17,025,637	16,040,198	17,625,153	28,158,125	34,650,790
Ecuador	9,352,122	8,024,105	12,439,400	13,666,371	21,791,522	21,690,476
Paraguay	3,655,366	5,374,837	4,957,055	4,419,497	8,612,421	9,794,334
Peru	20,891,327	22,508,021	31,554,376	31,144,250	52,445,703	53,652,271
Uruguay	38,643,034	42,796,706	46,907.559	43,333,125	85,550,593	86,129,831
Venezuela	9,766,182	12,387,552	16,028,635	17,948,571	25,794,817	30,336,123
South American Republics	677,855,110	811,626,510	958,404,123	948,693,555	1,636,259,233	1,760,320,065
Total Latin America	887,224,083	1,057,833,232	1,253,750,152	1,285,910,798	2,140,974,235	2,343,744,030

[1] Fiscal year ending June 30.
[2] 1903.
[3] 1909.
[4] Fiscal year ending July 31.
[5] Fiscal year ending Sept. 30.

THE foreign commerce of the 20 Latin American Republics for the year 1910 amounted to $2,343,744,030, an increase of $202,769,795 over the preceding year. The population of these countries from the best obtainable data—estimates for about one-half the Republics and probably in such case too large—amounts to 73,666,028. Accepting the total of population as given, the foreign commerce of Latin America for 1910 amounted to $31.81 per capita. The foreign commerce of the United States for the same year amounted to $3,427,415,895. On the basis of 92,174,515 population, the per capita foreign trade of the United States was $37.18, only $5.37 greater than that of Latin America. The imports of Latin America were $1,057,833,232, and of the United States $1,562,924,251. The exports of Latin America were $1,285,910,798, and of the United States $1,864,491,644. The Latin American per capita of imports and exports were $14.36 and $17.46, and the United States per capita $16.96 and $20.22. In a number of the Latin American countries the per capita trade far exceeded that of the United States, i. e., Cuba, per capita of imports $48.01, of exports $69.88; of total $117.89; Argentina, imports $48.82, exports $51.72, total $100.54; Uruguay, imports $38.49, exports $38.97, total $77.46; Chile, imports $30.89, exports $34.29, total $65.18.

The fact which has the greatest interest to the commercial world of to-day and bespeaks for itself in the future a preponderating position, is the enormous and sudden rise of Latin America in the scale of commerical importance. Underlying this fact is the growing purchasing power and the great producing power of these countries, as yet but sparsely settled. With a growth in population, and with the development which is even now in progress and proportionately increasing, the commanding commercial importance of these countries is already assured.

Comparing the year 1897, just preceding the Spanish-American War, with the year 1910, Latin American foreign trade shows the following remarkable growth:

LATIN AMERICA.

	Imports.	Exports.	Total.
1910	$1,057,833,232	$1,285,910,798	$2,343,744,030
1897	415,079,562	495,342,937	910,422,499
Increase	642,753,670	790,567,861	1,433,321,531
Per cent of increase	154.9	159.6	157.4

Separating the 20 Republics into two groups, the first to include the North American countries Cuba, Haiti, Dominican Republic, Mexico, Guatemala, Salvador, Honduras, Nicaragua, and Costa Rica, and the second South America, i. e., Colombia, Panama, Venezuela, Brazil, Ecuador, Peru, Bolivia, Chile, Uruguay, Argentina, and Paraguay, the following results are shown. Panama in 1897 formed a part of Colombia and must therefore for purposes of comparison in 1910 be joined to the second group.

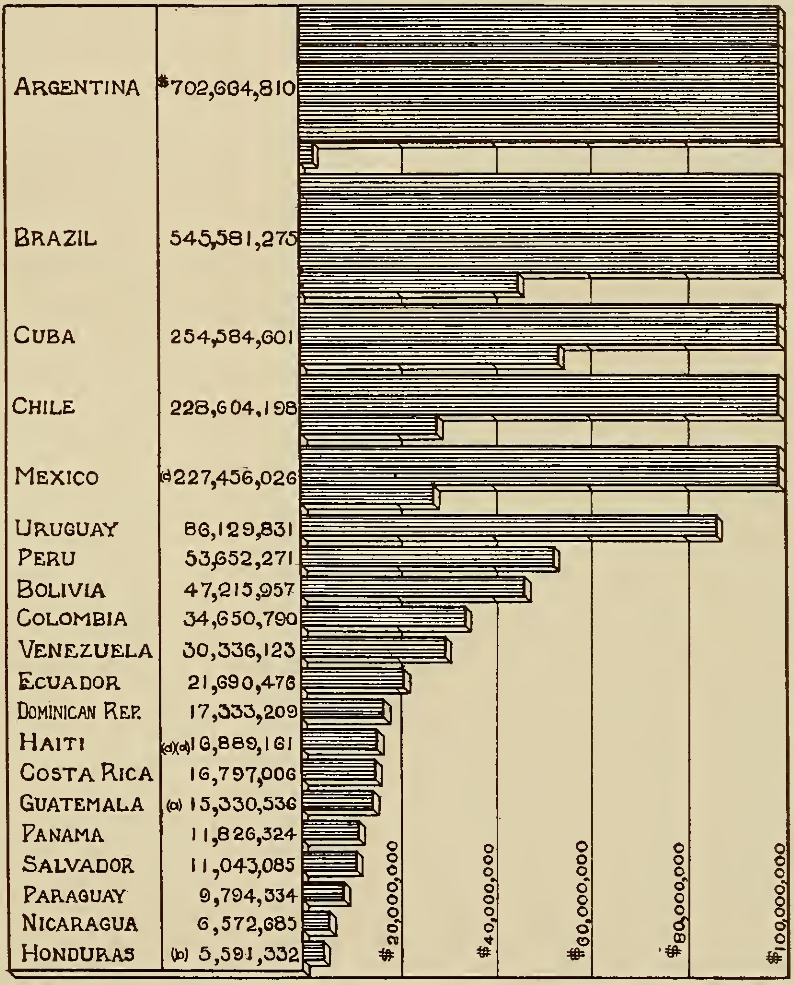
NORTH AMERICAN REPUBLICS.

	Imports.	Exports.	Total.
1910	$236,149,728	$335,447,913	$571,597,641
1897	80,848,144	116,711,169	197,559,313
Increase	155,301,584	218,736,744	374,038.328
Per cent of increase	192.1	187.4	189.4

SOUTH AMERICAN REPUBLICS.

1910	$821,683,504	$950,462,885	$1,772,146,389
1897	334,231,418	378,631,768	712,863,186
Increase	487,452,086	571,831,117	1,059,283,203
Per cent of increase	145.9	151.2	148.6

— FOREIGN TRADE —
OF
— LATIN AMERICA —
IN
— 1910 —



Note:

(a) 1909

(b) Fiscal year ending July 31.

(c) Fiscal year ending June 30.

(d) Fiscal year ending Sept. 30.

PAN AMERICAN UNION

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A considerable increase in trade, both in imports and in exports, has occured in every one of the 20 Republics, but not to the same degree in each. As examples of trade development under favorable conditions, Cuba from the first group and Argentina from the second may be given. To avoid fluctuations, instead of the single year 1897, the average of the three years, 1896, 1897, and 1898, is taken as showing the trade of that period.

CUBA.

	Imports.	Exports.	Total.
1910	$103,675,581	$150,909,020	$254,584,601
1896-1898 (average)	11,253,063	17,931,502	29,184,565
Increase	92,422,518	132,977,518	225,400,036
Per cent of increase	821.3	741.6	772.3

ARGENTINA.

1910	$341,217,536	$361,447,274	$702,664,810
1896-1898 (average)	105,960,667	117,266,667	223,227,334
Increase	235,256,869	244,180,607	479,437,476
Per cent of increase	222.1	208.2	214.8

The year's increase in foreign trade, 1910.

Countries.	Imports.	Exports.	Total.
Mexico	$19,166,378	$14,472,826	$33,639,204
Guatemala	[1] 560,269	3,323,076	2,762,807
Salvador	[1] 431,683	512,406	80,723
Honduras	437,863	581,315	1,019,178
Nicaragua	[1] 375,622	341,444	[1] 34,178
Costa Rica	1,845,467	204,498	2,049,965
Panama	1,300,687	266,855	1,567,542
Cuba	12,228,000	26 197,951	38,425,951
Dominican Republic	2,047,410	2,361,600	4,409,010
Haiti	1,179,518	[1] 6,390,757	[1] 5,211,239
Argentine Republic	47,544,124	[1] 23,982,738	23,561,386
Bolivia	3,729,593	4,212,815	7,942,408
Brazil	55,884,712	1,674,609	57,559,321
Chile	12,922,071	8,175,002	21,097,073
Colombia	4,907,710	1,584,955	6,492,665
Ecuador	[1] 1,328,017	1,226,971	[1] 101,046
Paraguay	1,719,471	[1] 537,558	1,181,913
Peru	1,616,694	[1] 410,126	1,206,568
Uruguay	4,153,672	[1] 3,574,434	579,238
Venezuela	2,621,370	1,919,936	4,541,306
Total Latin America:			
Increases	173,304,740	67,056,259	208,116,258
Decreases	2,695,591	34,895,613	5,346,463
Net increases	170,609,149	32,160,646	202,769,795
Latin Republics in North America:			
Increases	38,205,323	48,261,971	83,954,380
Decreases	1,367,574	6,390,757	5,245,417
	36,837,749	41,871,214	78,708,963
South American Republics:			
Increases	135,099,417	18,794,288	124,161,878
Decreases	1,328,017	28,504,856	101,406
	133,771,400	[1] 9,710,568	124,060,832

[1] Decrease.

In comparing the foreign trade of the 20 Latin American Republics for the year 1910 with that of the preceding year the most significant fact disclosed is the very great increase in imports and the only moderate increase in exports. The enormous trade balance of 1909—$366,526,069 (exports $1,253,750,152, imports $887,224,083) gave way to a smaller balance of $228,077,566 (exports $1,285,910,798, imports $1,057,833,232). In other words, what Latin America gained in credits from the great balance of 1909 went to swell its purchases in 1910.

Trade balances.

	1909	1910
Mexico	$37,283,796	$32,590,244
Guatemala	944,557	4,827,902
Salvador	2,608,498	3,552,587
Honduras	[1] 590,952	[1] 447,500
Nicaragua	689,105	1,406,171
Costa Rica	2,132,973	492,004
Panama	[1] 7,253,832	[1] 8,287,664
Cuba	33,263,488	47,233,439
Dominican Republic	4,201,343	4,515,533
Haiti	12,698,080	5,127,805
Argentine Republic	91,756,600	20,229,738
Bolivia	10,462,735	10,945,957
Brazil	128,641,704	74,431,601
Chile	16,186,709	11.439.640
Colombia	3,922,271	599,516
Ecuador	3,087,278	5,642,266
Paraguay	1,301,689	[1] 955,340
Peru	10,663,049	8,636,229
Uruguay	8,264,525	536,419
Venezuela	6,262,453	5,561,019
Latin Republics of North America	85,977,056	91,010,521
South American Republics	280,549,013	137,067,045
Total	366,526,069	228,077,566

Manifestly the excess in values of exports over imports is not a true measure of the increase of wealth in any country, for the country may grow richer with a balance of trade against it, e. g., England, and to the contrary it may grow poorer with the balance in its favor. But in the Latin American countries where exports are almost entirely from agriculture, stock raising, forests, and mines, and imports are nearly all highly manufactured goods, a favorable trade balance, while by no means representing the amount of the increase of wealth, does ordinarily show the fact of increase and furnishes an index of the amount. In most cases it is the factor of the greatest weight in determining the increase and the amount thereof.

The broad underlying fact is that the purchasing power of Latin America increases in a fairly constant ratio of about 11 or 12 per cent a year. This measures approximately the increase in wealth in the Republics, which, in the ultimate analysis, now depends upon the producing power in agriculture, stock raising, forest products, and mining, the aggregate of which increase is in about the same ratio as the increase in purchasing power, viz, 11 or 12 per cent a year.

This statement may be taken as approximately true of the immediate present and of the near past, but it may fall far short of the truth as to the future.

It is a significant fact, evidenced in many ways, that the accumulating wealth of Latin America is beginning to claim a place along with the investing capital of Europe. The standard of living in every one of the Republics has been raised in the last 12 or 14 years, and this advance has absorbed to a great extent the accumulating wealth which has thereby become not immediately productive, or rather not productive in any way ordinarily measured by statistics. But it is likewise true that a part of the accumulating wealth has been turned into more immediately productive channels. This last movement should advance, and with its advance the proportionate increase in wealth will be greater than in the past by an added factor.

Latin American capital can not yet and will not for many years to come on its own ground oust European and United States capital. The field is too large and the profits are too great not to attract and hold capital from all the investing world. The Latin American countries are fully alive to the fact that where the foreigner makes one dollar the country makes two or even ten as the case may be, but the industrial history of the United States will be the industrial history of Latin America, and this means that gradually national capital will come to control national industries. This is the legitimate ambition of the Latin American Republics.

While, taken as a whole, the forward industrial and trade movement of Latin America is constant, yet this forward movement is not the same in all the Republics, nor, in the larger ones, the same in all parts of the country, nor is it alike in all the industries. The disturbing effect of unfavorable political conditions, a depreciated and fluctuating paper currency, an inadequate tax system, a want of confidence on the part of capitalists in the security of investments; one or all of these causes has operated to hold back the development of some of the countries, but in none can it be said in fairness that the forward movement is not discernable.

In nearly all the Republics political conditions are stable and capital is sure of its investment; in fully two-thirds the money standard does not fluctuate in value, and in all there is a constant advance toward better tax and budgetary system and practice.

Western Europe and the United States furnish the market for nearly all Latin American products and in this market the prices are fixed. The balance wheel of a broad home market does not exist, for there is but little manufacturing and a sparse population. Under these conditions Latin America is peculiarly sensitive to the rise and fall of prices, so that its industrial movement may be well described as of halts and rushes. Nevertheless the position is economically sound and remarkably strong in this, that no matter within how great a range the demand of Europe and the United States for Latin American products may fluctuate, and no matter what may be the rivalry of other countries in producing these products, the need for the great staples of wheat, corn, rubber, coffee, tin, gold, silver, copper, nitrate, sugar, tobacco, cacao, wool, hides, beef, and mutton must increase; and most potent of all is the fact that Latin America can and does produce nearly all of these staples and scores of others at a cost less by 50 per cent or more than other competing countries.

Character of Exports and of Imports of 1910.

Some particularization of the exports and imports of Latin America is proper in a general survey of trade.

EXPORTS.

Mexico.—Value, $130,023,135; classified in general as mineral, $78,260,037; vegetable, $38,857,899; animal, $10,052,092; manufactures, $1,768,326; and miscellaneous, $1,084,781.

The mineral exports were: Silver, $38,175,000; gold, $21,318,000; other metals, including antimony, mercury, copper, lead, and zinc, $18,308,000. The principal vegetable exports were: Coffee, $4,043,000; rubber, $8,380,034; chicle, $1,704,000; chick peas, $1,564,000; guayule rubber, $4,734,000; henequen, $11,048,000; ixtle, $1,546,000; mahogany and ebony, $1,161,000; and zaceton root, $1,367,000. The principal animal exports were: Cattle, $2,518,000; goatskins, $2,008,000; and hides, $3,995,000.

Guatemala.—Value, $10,079,219. The principal exports were: Coffee, $8,816,000; hides, $309,000; woods, $264,000; and bananas, $230,000.

Salvador.—Value, $7,297,836. The principal exports were: Coffee, $5,129,000; silver, $620,000; gold, $601,000; indigo, $315,000; sugar, $293,000.

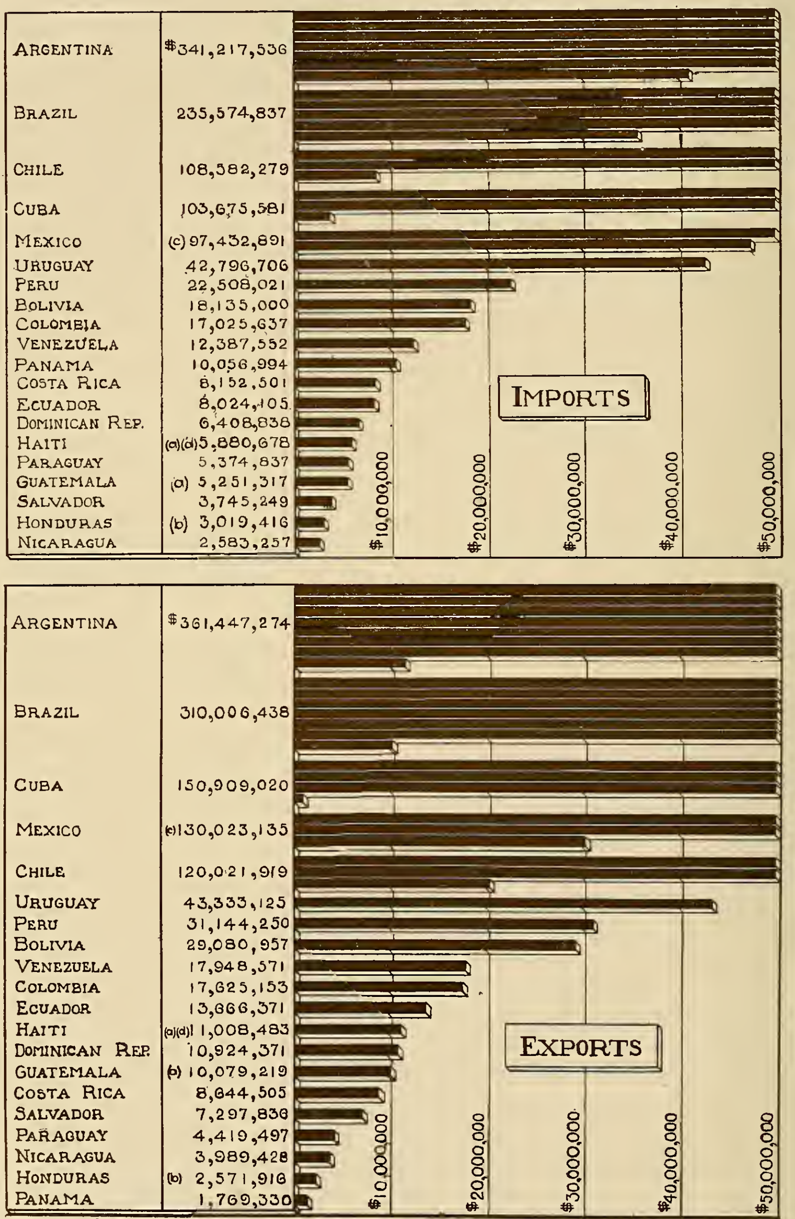
Honduras.—Value, $2,571,916. The principal exports were: Gold and silver ore, $782,000; and bananas, $968,000.

Nicaragua.—Value, $3,989,428. The principal exports were: Coffee, $1,547,000; woods, $416,000; rubber, $230,000; and sugar, $182,000.

Costa Rica.—Value, $8,644,505. The principal exports were: Coffee, $2,840,000; bananas, 9,097,000 bunches; gold and silver, $837,000; hides and skins, $129,000; and rubber, $106,000.

Panama.—Value, $1,769,330. The principal exports were: Bananas, $921,000; ivory nuts, $133,000; cocoanuts, $158,000; and rubber, $173,000.

◦ IMPORTS AND EXPORTS OF LATIN AMERICA ◦
IN
— 1910 —



(a) 1909
P.A.U. (b) Fiscal year ending July 31.
(c) Fiscal year ending June 30.
(d) Fiscal year ending Sept. 30.

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Cuba.—Value, $150,909,020. The principal exports were: Sugar, $108,763,000; molasses, $1,478,000; distillates, $356,000; tobacco, unmanufactured, $15,451,000; tobacco, manufactured, $12,423,000; iron and copper ore, $4,350,000; woods, $1,663,000; fruits, $2,098,000; hides and skins, $1,895,000; honey and beeswax, $704,000; grains and vegetables, $453,000; and sponges, $355,000.

Dominican Republic.—Value, $10,924,371. The principal exports were: Sugar, $5,591,000; cacao, $2,850,000; leaf tobacco, $958,000; coffee, $324,000; bananas, $289,000; beeswax, $149,000; and hides, $124,000.

Haiti.—Value, $11,008,483. The principal exports were: Coffee, 41,343,000 pounds; cacao, 4,612,000 pounds; cotton, 3,316,000 pounds; honey, 641,000 gallons; orange skins, 452,000 pounds; cotton seed, 6,292,000 pounds; and logwood and logwood roots, 95,000,000 pounds.

Argentina.—Value, $361,447,274; classified in general as live animals and meat products, $159,000,000; agricultural products, $190,500,000; forest products, $10,300,000; hunting and fishing products, $1,400,000; mine products, $525,000.

The principal live animals were beef cattle, $4,000,000. The principal meat products were: Frozen beef, $24,000,000; frozen mutton, $5,820,000; salt cattle hides, $16,953,000; flint cattle hides, $13,758,000; wool, $57,300,000; sheepskins, $8,500,000; jerked beef, $1,000,000; goat skins, $1,000,000; bristles, $1,300,000; chilled beef, $820,000; horse hides, $495,000; kidskins, $300,000; canned meat, $1,150,000; meat extract, $2,980,000; beef scrap and meal, $1,230,000; butter, $1,110,000; tallow and grease, $9,270,000; maragin oil, $790,000; and bones, $1,400,000. The wool export was $57,083,000.

The principal agricultural products were: Indian corn, $58,453,000; wheat, $70,000,000; linseed, $43,266,000; oats, $7,900,000; hay, $465,000; wheat flour, $4,800,000; and bran, $4,285,000.

The principal forest products were quebracho wood and extract; of the former, $5,436,000, and of the latter, $4,297,000.

The principal mining product was copper ores, $362,000, and the principal hunting and fishing products were whalebone, $860,000, and nutria skins, 295,000.

Bolivia.—Value, $29,080,957. The principal exports were: Tin, $14,803,000; silver, $2,106,000; bismuth, $769,000; copper, $714,000; rubber, $10,730,000; and coco, $168,000.

Brazil.—Value, $310,006,438. The principal exports were: Coffee, $127,213,000; rubber, $124,401,000; hides, $8,927,000; yerba mate, $9,576,000; cacao, $6,824,000; tobacco, $8,049,000; skins, $3,464,000; sugar, $3,500,000; cotton, $4,440,000; gold, $1,955,000; manganese, $1,888,000; Brazil nuts, $1,408,000; carnauba, $1,422,000; bran, $1,814,000; cotton seed, $640,000; and monazite sand, $631.

Chile.—Value, $120,021,919; classified in general as animal products, $8,823,644; vegetable products, $8,074,523; mineral products, $98,234,335.

Under animal products the principal exports were: Hides, $837,000; wool, $678,000; chinchilla fur skins, $410,000; wax, $127,000. The principal vegetable products were: Fruits and grains, $6,916,000; and fruit and grain products, $764,000. Under mineral products the principal exports were: Copper, 26,062 metric tons; copper ore, 78,518 tons; bar silver, 317,212 grams; and nitrate of soda, 2,357,000 tons, worth $86,018,000.

Colombia.—Value, $17,625,153. The principal exports were: Coffee, $6,339,000; bananas, $1,118,000; tobacco, $428,000; ivory nuts, $408,000; rubber, $384,000; cacao, $236,000, and divi-divi, $101,000.

Ecuador.—Value, $13,666,371. The principal exports were: Cacao, $7,896,000; ivory nuts, $1,669,000; Panama hats, $1,259,000; rubber, $1,006,000; coffee, $736,000; gold ore, $135,000; gold, $114,000; hides, $357,000.

Paraguay.—Value, $4,419,497. The principal exports were: Hides, $1,135,000; quebracho extract, $634,000; yerba mate, $554,000; woods, $980,000; tobacco, $534,000; oranges, $259,000.

Peru.—Value, $31,144,250. The principal exports were: Mineral and metals, $10,000,000; rubber, $4,770,000; sugar, $4,130,000; cotton, $2,075,000; wool, $2,135,000; guano, $1,950,000; hides, $620,000; and straw hats, $480,000.

Uruguay.—Value, $43,333,135. The principal exports were: Wool, $19,317,000; hides and skins, $11,543,000; beef extracts, $6,401,000; live animals, $1,855,000; tallow and other fats, $1,658,000; hair, $354,000; bone and bone ash, $250,000; residual animal products, $206,000; wheat, $2,344,000; flour, $324,000; feed stuffs, $101,000; and game and fish, $165,000.

Venezuela.—Value, $17,948,571. The principal exports were: Coffee, $8,051,000; cacao, $3,382,000; balatá rubber, $2,194,000; hides, $932,000; rubber, $852,000; goatskins, $380,000; gold, $309,000; live cattle, $194,000; asphalt, $183,000; horns, $172,000; copper ore, $153,000; sugar, $148,000; herron plumes (aigrets), $134,000, and divi-divi, $106,000.

IMPORTS.

The range of Latin-American imports covers nearly the whole field of human wants, from primary food products to articles of the highest luxury, but is narrowed to products and manufactures in a finished or nearly finished state, and includes but few raw products for manufacturing. What manufacturing there is depends for its supplies upon home production and only occasionally uses foreign material as subsidiary thereto.

Considerable as is at present the per capita importation of Latin America, its needs and demands are only just at the beginning. Its desire to purchase far outruns its ability, and this is axiomatic of all the civilized world, whether taken by countries or by individuals. Its ability to purchase is measured by its producing capacity, and herein it has an enormous advantage in that exploitation has but scratched the surface of its natural resources.

A brief outline of the imports of four of the Republics—Argentina, Brazil, Mexico, and Cuba, two from the southern and two from the northern group—may serve to show the character of imports into Latin America.

Argentina.—Total imports, $341,217,536, including food products, $26,327,000; tobacco, $5,900,000; wines, liquors, and other beverages, $14,503,000; textiles and manufactures thereof, $66,314,000; oils, $13,475,000; chemical and pharmaceutical products, $11,921,000: iron, steel, and manufactures, $41,846,000; other metals and manufactures, $12,484,000; agricultural implements and machinery, $18,354,000; railway cars, equipment, rails, carriages, wagons, automobiles, etc., $34,042,000; coal, earths, stones, etc., $30,000,000; building material, $28,360,000; and electrical apparatus, $5,570,000.

Brazil.—Total imports, $235,574,837, including cotton yarn, $852,000; sewing thread, $2,488,000; steel bars and rods, $636,000; iron bars, rods, and plates, $1,313,000; staves and hoops, $146,000; pine lumber, $2,041,000; turpentine, $216,000; coal, $11,738,000; cement, $3,374,000; leather, $3,268,000; rosin, $968,000; carpets, $223,000; cotton goods, bleached cottons, $2,027,000; prints, $1,949,000; dyed, $4,773,000, other cottons, $3,165,000; artillery ammunition, $1,854,000; small-arms ammunition, $928,571; small arms, $2,117,000; motor cars, $1,147,000; railway cars, $2,395,000; copper wire, $636,000; copper manufactures, $1,496,000; iron wire, $2,397,000; corrugated iron, $1,023,000; nails, screws, etc., $486,000; iron and steel structural material, $2,616,000; telephone and telegraph posts, $1,474,000; steel rails, couplings, etc., $6,572,000; tubes and pipes, $2,263,000; iron and steel manufactures, not specified, $3,016,000; electrical apparatus, $3,221,000; electric cables, $562,000; small tools, $2,516,000; locomotives, $2,130,000; stationary engines, $840,000; sewing machines, $1,562,000; industrial machinery, $3,079,000; agricultural machinery, $513,000; machinery not specified, $6,002,000; furniture, $530,000; print paper, $1,655,000; paper supplies, $1,170,000; boots and shoes, $333,000; paints, $695,000; calcium carbide $594,000; drugs not specified, $3,810,000; lighting apparatus, $526,000; hats, $778,000; dynamite, $333,000; coal oil,

$4,155,000; lubricating oils, $848,000; rice, $1,222,000; codfish, $5,431,000; potatoes, $1,048,000; distilled spirits, $674,000; canned vegetables, $420,000; preserved fish, $1,392,000; flour, $10,102,000; dried fruits, $512,000; hams, $395,000; condensed milk, $1,253,000; butter, $1,487,000; cheese, $936,000; salt, $633,000; wines, common, $7,259,000; wines, fine, $2,273,000; and jerked beef, $4,500,000.

Mexico.—Total imports, $97,432,891, including manufactures of gold, silver, and platinum, $1,629,000; of copper and alloys, $2,681,000; of tin, lead, and zinc, $530,000; of iron and steel, $13,815,000; of stones and earths, $9,204,000; textile fibers (principally ginned cotton), $2,495,000; fruits and grains, $10,007,000; lumber, $2,751,000; wood manufactures, $2,298,000; machinery and apparatus, $10,471,000; textiles, of cotton, $5,413,000; of linen and hemp, $606,000; of wool, $2,223,000; of silk, $1,138,000; of silk mixed and imitation silk, $731,000; live animals, $694,000; meats, wool, etc., $700,000; animal food products, $3,277,000; animal industrial products (principally boots, shoes, and leather), $2,836,000; chemical and pharmaceutical products, $5,619,000; wines, spirits, etc., $3,276,000; cars, carriages, and wagons, $2,877,000; paper and manufactures, $2,533,000; arms and explosives, $1,451,000.

Cuba.—Total imports, $103,675,581, including stones and earths, $989,000; shale, bitumen, etc., $1,089,000; glass and crystal ware, $1,139,000; earthenware and porcelain, $695,000; manufactures of gold, silver, and platinum, $338,000; of iron and steel, $6,164,000; of copper, $809,000; paints and colors, $673,000; chemical products, $2,781,000; oils, $1,897,000; cotton manufactures, $8,528,000; other vegetable-fiber manufactures, $3,562,000; wool manufactures, $1,088,000; silk manufactures, $620,000; paper and pasteboard, $1,498,000; wood and lumber, $2,506,000; hides and skins, $573,000; rubber manufactures, $4,453,000; machinery, $8,382,000; apparatus, $2,822,000; meats, $11,477,000; fish, $1,310,000; breadstuffs, $13,358,000; vegetables, $4,522,000; beverages, $3,296,000; and dairy products, $2,524,000.

DISTRIBUTION OF TRADE, EXPORTS AND IMPORTS.

In total of values the United States leads in the foreign commerce of Latin America, exports and imports taken together. The volumes and percentages are as follows:

	Total.	United States.	United Kingdom.	Germany.	France.
Volume	$2,343,744,030	$690,486,703	$545,164,347	$311,179,834	$193,512.595
Per cent of whole	100.00	29.46	23.26	13.27	8.26

Separating the 20 Republics into halves, as given in the general table heading this article, the results are as follows:

LATIN REPUBLICS OF NORTH AMERICA.

	Total.	United States.	United Kingdom.	Germany.	France.
Volume	$583,423,965	$388,098,426	$63,096,797	$43,740,420	$30,464,947
Per cent of whole	100.00	66.52	10.81	7.49	5.22

SOUTH AMERICAN REPUBLICS.

	Total.	United States.	United Kingdom.	Germany.	France.
Volume	$1,760,320,065	$302,388,277	$482,067,550	$267,439,414	$163,047,648
Per cent of whole	100.00	17.18	27.39	15.19	9.26

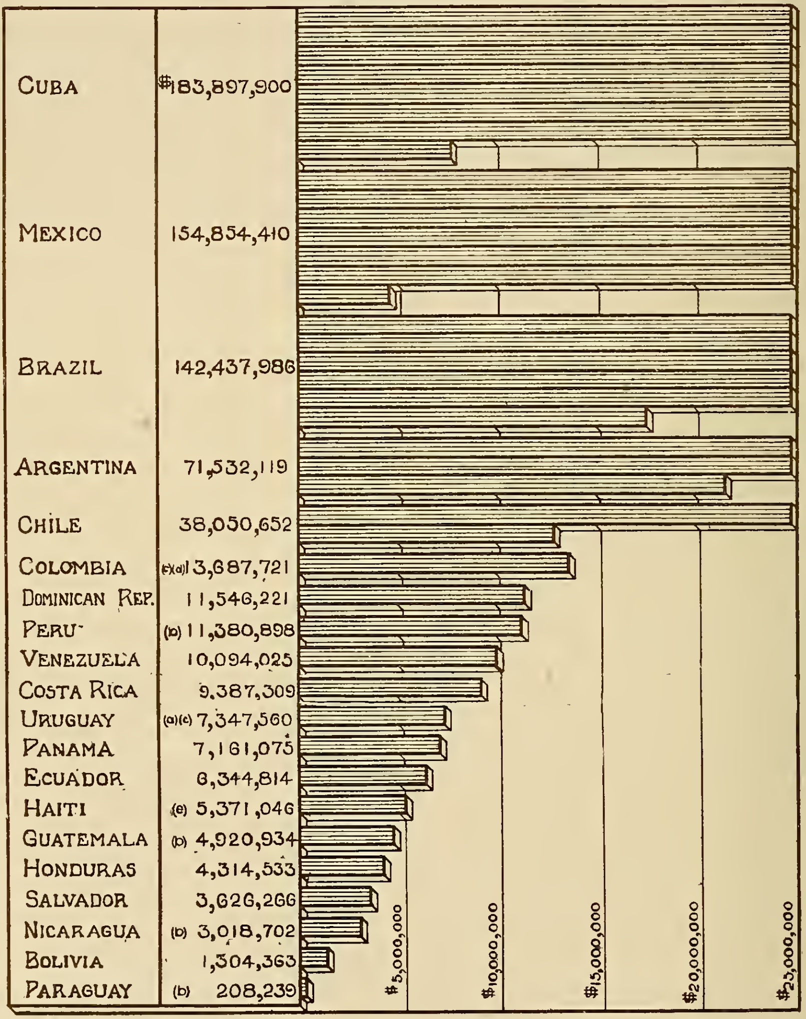
Latin American exports to leading commercial countries, 1910.

Countries.	United Kingdom.	Germany.	France.	United States.
Mexico	$14,267,251	$4,219,785	$6,141,824	$98,432,859
Guatemala (1909)	1,006,263	5,828,554	32,748	2.739,075
Salvador	483,809	1,584.632	1,097,118	2,279,669
Honduras	50,083	159,900	3,278	2,255.011
Nicaragua (1909)	843,453	423,579	776,429	1,677,010
Costa Rica	3,053,069	289,553	39,184	5,205,803
Panama	165,273	93.669	1,966	1,508,422
Cuba	10,696,289	3,646.398	1,549.080	129,328,507
Dominican Republic	141,947	2,094,033	723,834	7.661,303
Haiti	[1] 840,000	[1] 3,250,000	[1] 3,600,000	[1] 1,100,000
Latin North American Republics	31,547,437	21,590,093	13,965,461	252,187,659
Per cent of total exports ($337,217,243)	9.35	6.40	4.14	74.78
Argentine Republic	78,368,710	43.703,172	36,628,860	24,565,794
Bolivia	18,055.406	6,015,390	2,009.527	62,438
Brazil	73,440,577	36.285.755	26,116,585	112,184,068
Chile	46,386,858	23,142.907	5,237,286	24,680.878
Colombia (1909)	3,050,863	1,549,334	482,781	8,587,721
Ecuador	1,140,873	2,248,223	4,793.999	4,090.511
Paraguay (1909)	1,990	1,319,887	42,319	5,373
Peru (1909)	12,988,546	1,701,448	2,620,224	7,268,718
Uruguay (1909)	2,771,832	6,900,280	9,141,991	3,890,365
Venezuela	2.103,908	2,313,556	5,625,845	6,305.486
South American Republics	238,309.563	125,179.952	92,699.417	191,641.352
Per cent of total exports ($948,693,555)	25.12	13.19	9.77	20.20
Total of the 20 Republics	269,857,000	146,770.045	106,664,878	443,829.011
Per cent of total exports ($1,285,910,798)	20.99	11.41	8.29	34.51

[1] Estimates.

Latin American exports may be divided, broadly, into two classes, food products and raw material for use in the industries. Except of sugar, coffee, cacao, and fresh fruits, the United States was not a buyer of food products in any considerable quantities. Of fresh fruits it took all, of sugar nearly all, of coffee about one-half, and of cacao one-fifth or less. Tobacco, which can scarcely be included

• LATIN AMERICAN TRADE •
WITH THE
• UNITED STATES •
IN
—1910—



Note:
(a) Imports 1908. (c) Exports 1909.
(b) 1909. (d) Imports estimated.
(c) Exports estimated.

PAN AMERICAN UNION.

in either of the two classes, found its best market in the United States, which took nearly all the leaf and about 40 per cent of the cigars.

In raw material the United States was the best market. Of the fiber plants of Mexico, out of a total export of over $11,000,000 in henequen, the United States took over $10,700,000, and of a total of over $1,546,000 in ixtle the United States took $1,021,000. Of a total of $1,367,000 in zaceton root $715,000 went to France, $530,000 to Germany, and only $73,000 to the United States.

Rubber.—The Brazilian output was $124,401,000, of which the United Kingdom's share was $57,926,000, the United States $47,409,000, France $12,485,000, and Germany $4,225,000. The Mexican export of rubber was $8,380,000, of which the United States took $7,613,000; and of guayule rubber $4,734,000, of which the United States took $3,768,000. Practically all the Central American rubber went to the United States, as did the greater part of that from Colombia. The rubber and balata rubber of Venezuela went principally to the United Kingdom, France, and Germany. The exports of Ecuadorian rubber, $1,006,000, went to the United States, Germany, and the United Kingdom, in the order given. The Bolivian export of $10,730,000 went principally to the United Kingdom.

Hides.—The Argentine output of salt hides was 61,000,000 kilos, worth $16,953,000, of which 23,668,000 kilos went to Germany, 12,592,000 to the United States, 10,781,000 to the United Kingdom, and 9,560,000 to Belgium; of flint hides, 29,844,000 kilos, worth $13,758,000, of which 14,703,000 kilos went to the United States. 5,866,000 to Italy, 2,841,000 to Spain, and 2,621,000 to Germany; and of horse hides, worth about $500,000, the greater part went to Germany. The Brazilian export of hides was $8,627,000, of which Germany's share was $3,243,000, the United Kingdom $2,146,000, France $1,557,000, and the United States only $207,000. The Uruguayan export of hides was $6,344,000, of which about $2,400,000 went to the United States. From Colombia, Central America, and Mexico, the great bulk of the hide exports went to the United States. The Mexican output was $3,995,000, of which the United States took $3,686,000. The Cuban export of hides and skins was $1,895,000, of which $1,070,000 was to Germany and $522,000 to the United States.

Goatskins.—The Mexican export of goatskins was $2,008,000, practically all to the United States, as was also the goatskin export of Central America. The Argentine export of goat and kid skins was 2,217,000 kilos, worth $1,300,000, of which 1,504,000 kilos went to the United States and 596,000 kilos to France.

The Chilean output of nitrate of soda was 2,367,000 metric tons, worth $86,018,000, of which 849,000 tons were exported to the United

Kingdom, 587,000 to the United States, 496,000 to Germany, and 92,000 to France.

Wool.—The Argentine export of wool amounted to 150,600 metric tons, worth $57,083,000. Of the total there was exported to France 58,967 tons, to Germany 40,707 tons, to Belgium 10,496 tons, and to the United States 10,496 tons. The Uruguayan export of wool was worth $20,000,000, the bulk of which was to France and to England. Peruvian wool ($2,140,000) went nearly all to the United Kingdom. The Chilean export of wool was 2,262 tons, of which 1,131 tons went to the United Kingdom and 641 tons to France.

Of the great food staples of Argentina and Uruguay, the bulk was to the United Kingdom. In Argentina the principal exports of animal foods were frozen and chilled beef, $25,300,000; frozen mutton, $5,820,000; and jerked beef, $1,000,000. The meat export of Uruguay was $6,401,000. Of agricultural products the value of the wheat export was $70,000,000; of Indian corn, $58,453,000; of linseed, $43,266,000; and of oats, $7,900,000. Wheat flour, $4,800,000. Nearly all the wheat flour and about 16 per cent of the wheat was exported to Brazil.

Coffee.—The Brazilian export of coffee was $127,213,000. Of this amount $58,808,000 went to the United States, $16,152,000 to Germany, $14,773,000 to the Netherlands, $8,859,000 to France, and $8,721,000 to Austria-Hungary. The Venezuelan export was $8,051,000, of which the United States took $3,985,000, France $2,511,000, and Germany $846,000. The Colombian export was $6,340,000, of which the United States took $4,170,000, the United Kingdom $550,000, and Germany $320,000. The export of coffee from Salvador was $5,129,000; from Costa Rica, $2,840,000; from Nicaragua, $1,547,000; and from Guatemala $8,816,000. The bulk of the Nicaraguan coffee went to France, the remainder to Germany, the United Kingdom and the United States. The bulk of the Guatemalan coffee went to Germany, the remainder to the United Kingdom and Austria-Hungary. Costa Rican coffee went principally to the United Kingdom, the United States, and Germany. The small amount of coffee from Honduras went to the United States. The export of Mexican coffee amounted to $4,043,000, of which $2,415,000 went to the United States, $736,000 to France, and $519,000 to Germany. The Haitian output of coffee was over 41,000,000 pounds, of which the great bulk went to Europe.

The Cuban export of sugar was $108,762,000, of which $102,446,000 went to the United States.

Latin American imports from leading commercial countries, 1910.

Countries.	United Kingdom.	Germany.	France.	United States.
Mexico	$11,125,808	$10,134,038	$8,715,422	$56,421,551
Guatemala (1909)	1,135,420	1,249,559	273,215	2,181,859
Salvador	1,165,993	407,392	262,294	1,346,597
Honduras	424.077	284,387	101,720	2,059,522
Nicaragua (1909)	625,668	286,408	131.826	1,341,692
Costa Rica	1,318,474	974,371	321,106	4,181,506
Panama	2,166,989	966,151	307,982	5.652,653
Cuba	12,292,219	6,542,760	5,514,939	54,569,393
Dominican Republic	708,612	1,108,375	226,667	3.884,918
Haiti	586,190	196,886	644,315	4,271,046
Latin North American Republics	31,549,360	22,150,327	16,499,486	135,910,767
Per cent of total imports ($246,206,722)	12.00	8.99	6.70	55.20
Argentine Republic	106,096,072	59,295,021	32,641,121	46,966,325
Bolivia	5,060,452	2,487,824	251,773	1,241,925
Brazil	67,061,065	37,455,530	22,268,307	30.253.918
Chile	34,340,573	26,296,071	7,010.929	13,369,774
Colombia	[1] 4,100,000	[1] 2,600,000	[1] 1,700,000	[1] 5,100,000
Ecuador	2,483,945	1,574,135	526.615	2,254,303
Paraguay (1909)	1,244,533	733,082	234.898	202.766
Peru (1909)	7,619,984	3,339,951	950,516	4,112.180
Uruguay (1908)	12,125.682	6,438.561	3,765,166	3,457.195
Venezuela	3,625,681	2,039,287	998,906	3,788.539
South American Republics	243,757,987	142,259,462	70,348,231	110,746,925
Per cent of total imports ($811,626,510)	30.03	17.52	8.67	13.64
Total of the 20 Republics	275,307,347	164,409,789	86,847,717	246,657,692
Per cent of total imports ($1,057,833,232)	26.03	15.54	8.21	23.31

[1] Estimate.

While the United States leads in the total trade of Latin America, its percentage of this trade being 29.46 as against 23.26 for the United Kingdom, its nearest rival, and in the import trade of Latin America, as shown in the table above, is a close second to the United Kingdom, yet if a careful analysis of the trade be made it will be found that the imports from the United Kingdom are of a character usually classed by economists as much more beneficial to the exporting country than are those of the United States. The profit to the individual exporter must be sharply differentiated from benefits to the exporting country. What is great profit to the one may be but little profit or even loss to the other. To the country at large the greatest profit is derived from the export of articles in which the major value is represented by labor and skill. If therefore the value of manufactured articles to the exporting country be to the greater degree in proportion to the relative amount of labor and skill expended in their fabrication and to a lesser degree to the raw material entering therein, then the export trade of the United States to Latin America, and particularly to South America, is on a decidedly lower plane than that of any of the other leading exporting countries. The order of the countries as representing the relative values of their exports to Latin America on the basis, not of gross amounts but of quality of goods, would be about this: France, United Kingdom, Italy, Spain, Netherlands, Germany, Belgium, United States. If the imports of the Latin Republics of North America alone be considered, then the position of the United States in the order given must be advanced by several numbers.

In the iron and steel trade of all kinds, the character of the exports to Latin America from the United States is fully equal to that of the United Kingdom and decidedly superior to that of Belgium and Germany. In boots, shoes, and leather, the United States ranks with France or Italy and much ahead of the other countries. In the drug trade it occupies an average or even better than average position, but in most of the other classes of industries its exports to Latin America, and particularly to South America, are on a lower plane than that of any other country. For instance, in the textile trades, practically all the high-grade textiles are from France, Italy, the United Kingdom, Spain, and Germany. In silk, wool, and linen these countries control the field. In cotton textiles, the United States only competes in the cheaper grades. It sends cotton yarn, but knitted goods come from Europe. So in the wood trades. Lumber is from the United States, but furniture and other finished wood products are from Europe. Flour and wheat are from the United States, but biscuits, pastes, and the like are from the United Kingdom or Italy. So one may go through the list until, with the exceptions noted above, he finds that only in the Latin Republics of North America, and particularly Cuba and Mexico, is the United States a serious rival of Europe in high-grade manufactures.

PROMINENT IN PAN AMERICAN AFFAIRS

THE experiment of devoting a section of the BULLETIN to the description of various individuals who, by their interest in and association with men and things Latin-American, have attained positions of prominence in these circles, has been most cordially received by the constituency of this publication. This is encouraging, and it is therefore a real satisfaction to continue the practice and to include in this issue another series of portraits and biographical sketches of such men. A further source of gratification is to note how broad are the circles from which can be drawn those who may properly and fittingly be included within these columns. The ever-increasing number of such men is in a sense a thermometer recording the degree of our commerce and comity, and these are constantly being developed and strengthened between the Americas.

Since the publication of the last issue of the BULLETIN there have suddenly passed away a number of men notable in the official and commercial activities of Latin America. The Pan American Union wishes to take this opportunity to offer its profound regret at the untimely removal of these leaders in their respective lines of endeavor, and to extend its sincere expressions of sympathy to the friends and relatives of the late William Eleroy Curtis, of Washington, the first director of the Pan American Union, and a distinguished newspaper correspondent; of Cornelius Newton Bliss, Secretary of the Interior in the Cabinet of late President McKinley, and a member of the First International Conference of American States; of Archer Harman, prominent railroad builder of South America; and of Capt. Benjamin Dyer Manton, popularly known as the "father of the telephone in the River Plate," and former United States consul at Colonia, Uruguay.

WILLIAM ELEROY CURTIS, the first director of the Pan American Union, called during his time the Bureau of the American Republics, is dead. The end of a long, busy, and productive life came suddenly, without warning even to himself, on the evening of October 5, in Philadelphia. To those who knew him, and their number runs into the thousands in every country of the world, the news is a shock, and the blank left by his death will long remain unfilled. He was closely identified with Latin America during a great part of his professional activities, and had traveled over most of the countries of the Pan American Union, either in an official capacity or as journalist, and had written extensively and always with enthusiasm and respect concerning them. Most travelers and students to-day receive the germs of their appreciation for Latin America from the books that resulted from his records.

William Eleroy Curtis was born at Akron, Ohio, November 5, 1850. He was graduated bachelor of arts from Western Reserve College in 1871, receiving the degree of doctor of literature from that institution in 1901, and from Amherst College in 1907. He began his journalistic career on the staff of the Chicago Inter Ocean in 1873, becoming the Washington correspondent of the Chicago Record in 1887. He was appointed special commissioner from the United States to the Republics of Central and South America, and visited many of those countries before the first conference; he then served as executive officer of the first Pan American conference held in Washington in 1889–90, and on the opening of the Bureau of the American Republics he was made its first director, resigning from that post in 1893, but he always remained a stanch friend of the institution and its members. During the Chicago Exposition, 1891–1893, he was chief of the Latin American departments, and was sent as special commissioner in its behalf to Madrid, acting also as special envoy to the Queen Regent of Spain and to Pope Leo XIII in 1892. Continuing his newspaper work through all these other activites, he finally, in March, 1901, as correspondent for the Chicago Record-Herald, resumed his position in Washington, and from that time to the day of his death he continued his daily news letters on every variety of topic and from all sorts of places in the world.

Photo by Harris-Ewing.

WILLIAM ELEROY CURTIS.

Mr. Curtis's name will ever be famous for his daily letter in the Chicago Record-Herald and the Washington Star, for by their means he was enabled to attract attention to many things usually overlooked by the reading public, and to popularize many fields which needed only his genius to make interesting. But in addition to such prolific work, he expended his energy in other directions; he wrote several books, besides editing in book form various series of these letters; he was a student of history and made original research in that line; he was of course a great traveler, having probably as high a record for covered miles as any man in the world; and he was one of the social favorites of Washington and always brightened any gathering by his cordial presence. During his régime as first director of the Pan American Union he laid the groundwork for the handbooks, which have been published by that institution, and he himself wrote not a few of them personally. He was an active or honorary member of practically innumerable societies and clubs in the United States and abroad. Mr. Curtis will be missed by many friends in both Americas, and the Bulletin extends a deep sympathy to his wife and other members of his family surviving him.

CORNELIUS NEWTON BLISS.

Cornelius Newton Bliss, Secretary of the Interior in the Cabinet of President McKinley from 1897 to February, 1899, died at his home in the city of New York October 9, 1911. Mr. Bliss was born in Fall River, Massachusetts, January 26, 1833, and was educated in the public schools of his native city. Beginning his business in New Orleans, he soon moved to Boston, and finally to New York, where he continued to live until his death. Active in all political movements which seemed to him designed for the good of the country and of his party, he never sought office, and only occupied his high position at the earnest request of President McKinley and those who knew his energy and strength.

Mr. Bliss was a constant friend of Latin America and always entered with a hearty spirit into all projects that promised to promote closer relations between the Republics of the Western Hemisphere.

For that reason he took a prominent part in the First International Conference, in which, at the beginning, as one of the delegates from the United States, he was chairman of the committee on committees during the preliminary meeting in October, 1889, and was among those to announce to Mr. Blaine that he had been selected president of the conference. When that body reassembled in November of the same year Mr. Bliss was a member of the executive committee, and took part in the proceedings all through the conference with sustained activity.

ARCHER HARMAN.

Archer Harman.—A telegram from Hot Springs, Virginia, dated October 9, 1911, brings the sad news of the death of Mr. Archer Harman, who fell from his horse the day before, never recovering consciousness after the accident. His many friends in both continents will grieve for such an unexpected and untimely loss.

Mr. Harman, a great part of whose life had been spent in and devoted to Latin America, was born in Staunton, Virginia, 53 years ago. He came from one of the distinguished families of that State, his father, Col. Michael Archer Harman, having served on the staff of Gen. Robert E. Lee during the Civil War. He was a man of wonderful energy and resource, and put through with persistent thoroughness any project he undertook, surmounting difficulties that sometimes seemed impossible. He contracted for some of the construction of the Colorado Midland; but Mr. Harman's name will always be most intimately associated with the construction of the railway in Ecuador between Guayaquil, on the Pacific, and Quito, the capital of the Republic, 292 miles away, lying at an elevation of 10,000 feet. Working with his brother, Maj. John Harman, who lost his life in the active service of that railway, he spared no pains to accomplish what he had set his heart on, and after struggles and hardships which never for a moment daunted him he pushed the rails over the mountains, and on June 25, 1908, formally opened rapid communication from the coast to the interior, the dream of Ecuador from the day Meiggs planned the Oroya Railway in Peru.

At a banquet given on that date in honor of President Eloy Alfaro, of Ecuador, Mr. Harman said that—

On June 14, 1897, he was selected to construct the railway, and that for the 11 intervening years he had kept constantly at the task; so constantly that from February, 1899, to June 17, 1908, work was not suspended for one single day.

Such was the energy of the man, and for this splendid accomplishment the people of Ecuador have honored him. His heart was in it, and what time was not spent over the engineering problems on the spot in Ecuador Mr. Harman devoted with a whole-souled generosity to interesting foreign capital to support him in this undertaking.

Mr. Harman leaves a daughter, who was with him at the time of the fatal accident, and a widow now living in Milford, Pennsylvania. To them the BULLETIN wishes to proffer the warmest sympathy in their great personal bereavement.

BENJAMIN DYER MANTON.

CAPT. MANTON, for over forty years a resident of Uruguay, died at his summer home in Barbadoes, July 30, 1911. He was born in Rhode Island in 1829. When 17 years of age he made his first sea voyage, five years later sailing for California via Cape Horn. In 1852 he commanded the *Le Couq* in a voyage to Montevideo. As master of the *Messenger* several years later he carried 300 passengers from Liverpool to Melbourne, accomplishing the voyage in 71 days—a record passage. At the outbreak of the Civil War he enlisted, and was given command of the mortar-brig *Sea Foam* and at a later date of the U. S. S. *Relief*, attached to Dupont's squadron. On his discharge from the Navy he built two steamships, which he placed in the South American trade.

In 1868 Capt. Manton was appointed American consul at Colonia, Uruguay, retaining the position until the office was abolished in 1907. While at this post he installed in Colonia the first dock for repairing vessels ever established on the River Plate and equipped it with American material and machinery. In 1880 he introduced the first American horsepower threshing machine, to be shortly followed by the introduction of American reapers and harvesters.

But Capt. Manton's fame will rest particularly on his successful efforts to introduce the telephone. As a result of his endeavors in this direction he became widely known as the "father of the telephone in the River Plate." Against great opposition he introduced the first telephone—the Gower Bell—ever installed in these countries. After completing the telephone work he installed an electric-light plant and a telephone system in the city of Colonia. For some time he strongly urged an air-line railway from Montevideo to Colonia, there to connect with a fast line of ferryboats, so as to carry passengers and mail to Buenos Aires in three or four hours, and it appears now that the Government of Uruguay is to grant such a concession to two syndicates.

To Capt. Manton belonged largely the credit of having developed Colonia as a popular summer resort for the Argentine capital, only 26 miles away. A syndicate has recently purchased his beautiful estate, Villa Real, as the basis for this resort, and a large hotel and beautiful pleasure grounds are soon to be constructed.

Photo by Harris Ewing.

SEÑOR DON FRANCISCO J. PEYNADO,

Prominent lawyer of the Domican Republic.

Sr. Don **Francisco J. Peynado.**—In the person of Sr. Don Francisco J. Peynado is found that genial, sociable, and courteous demeanor which comes as a result of liberal education, breadth of intellect, travel and intermingling with peoples of all classes and nations. A Dominican by birth, Sr. Peynado chose the legal profession as his life work and soon gained a position of prominence in the judicial circles of the Dominican Republic. While deeply interested in all matters pertaining to the progress and development of his country, he nevertheless was unwilling to accept public office of a political character. His training and proclivities were always in the direction of upbuilding the material and physical phases of his country, particularly those affecting questions of public education, local and national sanitary improvements, and the development of more adequate means of communication and transportation. His especial interest and versatility in questions of this nature were generally recognized, and in response to the impulses prompted by his civic interest and from a sense of public duty, Sr. Peynado consented to accept at different times, the offices of president and alderman of the Municipal Government of Santo Domingo, Counselor of the Department of Fomento, President of the Lawyers' College, and also to serve as a member of the supreme board of education. In his capacity as a lawyer, Sr. Peynado holds a place of unusual distinction and esteem because of his sense of justice and desire for peaceful and amicable adjustment of frontier border disputes. This policy has won for him an appointment as one of the counselors to the Dominican Minister, at Washington, in the settlement of the boundary controversy with Haiti.

BURTON HOLMES,

One of America's noted travelers and lecturers.

Burton Holmes.—It is with great pleasure that the Bulletin of the Pan American Union is permitted to announce that opportunity during the coming winter will be given the people of the United States to listen to the always interesting story of South America and to see many beautiful views which that part of the world offers so lavishly. These sights and descriptions of travel form the South American series resulting from last summer's South American trip of Mr. Burton Holmes, the distinguished lecturer who has been so well known for his illustrated talks on many lands. Mr. Holmes has not been ignorant of this attractive field for his camera, yet he had hitherto hesitated about leaving the beaten path; but at the close of his last season, at the earnest solicitation of the director general, he decided to visit the southern continent for the purpose of adding this territory to his already long list of delightful travelogues.

This new series of Mr. Holmes consists of five lectures, illustrated of course, in his admirable manner. The first, as a necessary introduction to the subject of Latin America, is called "Glimpses of Spain and Portugal," and tells the story of the European Kingdoms from which our sister Republics sprang. The second "The cruise to South America," is more than the name implies, for it explains both the voyage, the varius ports at which the steamer anchors for a while, such as the island of Madeira and its picturesque surroundings, and the charm of disembarkation at Pernambuco, Bahia, Santos (with a trip to Sao Paulo), and Montevideo; then the Rio de la Plata is crossed and the traveler landed in Argentina. The third, "The American Paris, Buenos Aires," is given to that second largest Latin city in the world, but includes also views of the "camp," the pampas, and the social life outside the city itself. The fourth, "Over the Andes, Argentina, to Chile," takes the spectator and the listener across the continent within sight of that mighty peak Aconcagua, down the western slope into Chile, and through several cities of that energetic Republic, but on the return he is carried up the Parana River to the Tropic region of the Iguazu, a South American cataract rivaling if not surpassing Niagara in height and grandeur or the Victoria Falls of Africa in savage beauty. The fifth lecture is "Beautiful Brazil, Rio de Janeiro," which Mr. Holmes terms the first of cities beautiful; interesting with souvenirs of the imperial epoch, but to-day a miracle of transformation and sanitation, the worthy pride of republican Brazil. Thus a fair portion of the southern continent is examined, and much of the material, industrial and artistic progress there, is actually before our eyes.

Photo by Harris-Ewing.

DR. JOÃO BRAZIL SILVADO, JR.,

Commissioned by the Brazilian Government to study educational methods abroad.

Dr. SILVADO was born in Rio de Janeiro, Brazil, May 20, 1887. His father was superintendent of the School for the Blind in that city, and the boy grew up in close touch with these afflicted wards of the Government. His father afterwards became superintendent of the National Institute for the Deaf and Dumb, where the boy met in daily life another class of patients. Dr. Silvado studied law and obtained a degree in that profession, but his early experiences had a great influence on his ambitions, and he soon devoted himself to teaching the deaf and dumb. For six years he was instructor in the National Institute, and at the end of the period he was promoted, after competitive examination, to a more responsible position. In 1911 he was selected by the Brazilian Government to be commissioner, under the minister of justice and interior, to foreign countries, to study the most advanced methods of instruction for the deaf and dumb. Acting in this appointment Dr. Silvado left Rio de Janeiro in June, and his first visit was to the United States, where he is now, and where he is to remain for six months. He then goes to England, France, and Germany, spending six months in each country with the same purpose. On his return to Brazil he will be able to put into practice the results of his experience and observation, for the Government is eager to adopt all methods which will enhance the working value of such worthy institutions as that for the deaf and dumb.

ALFRED L. M. GOTTSCHALK.

Former United States Consul General, at Peru and Mexico.

Alfred L. M. Gottschalk has the distinction of being one of the five consuls general at large in the consular service of the United States. His district embraces a considerable area comprising European Russia, the Balkan States, Greece, Asia Minor, Persia, India (as far as the western frontier of the Straits Settlements), and Africa. Although one of the younger men in the consular service, Mr. Gottschalk has enjoyed a rather varied career. Born in New York City, February 8, 1873, he has always claimed the Empire State as his legal residence. He received his early education in private schools at New York, and then attended Kenyon College. He also studied at the New York University. Mr. Gottschalk combined the profession of newspaper correspondent and magazine writer together with the occupation of sugar grower in Santo Domingo. In 1900 he was appointed collector of customs at Monte Christi and held this post for two years. From this position he was appointed, after due examination, consul at San Juan del Norte on April 25, 1902. The following year he was transferred to Callao, Peru; two years later, May 25, 1905, the post was elevated to a consulate general and he was correspondingly promoted. In December of that year Mr. Gottschalk was transferred to Mexico City. He was consul general at that point until March 6, 1908, when he was designated one of the five consuls general at large.

LATIN AMERICA IN THE MAGAZINES

"**Tracking up the Rio Negro,**" in Harper's Magazine for October, written in Caspar Whitney's inimitable style, is the story of his canoe trip up the Rio Negro, the second largest tributary of the Amazon, to the Orinoco.

The article is replete with graphic description, scenic word painting, and humorous and whimsical pen pictures of the Indians who served as his crew and contains much information as to unusual modes of travel along the flowing highways of Brazil. Mr. Whitney's extensive travels throughout the comparatively unknown as well as known parts of this "little old world" enable him to strike the keynote of interest in every story of travel he writes and the unusual and bizarre are always to be found features.

Among the unusual features in this story is the description of the peculiar mode of navigation—or shall we say locomotion—employed by the Brazilians in getting upstream, called "tracking."

Photo by Caspar Whitney; courtesy of Harper's Magazine.

MANAOS, ON THE RIO NEGRO,

The rubber headquarters of Brazil, 1,000 miles from the Atlantic coast.

First, however, we have a description of the various types of canoes used by the natives:

> Throughout the length of the flowing road canoes are of few types, but of many names. The batelão, varying from 25 to 40 feet in length, with crews from four to a dozen, is the long-journey cargo boat, corresponding in some of its phases to the lancha of Venezuela. In both countries it has a deep cockpit covered, sometimes for half its length, sometimes wholly, with a thatched, barrel-shaped house, locally known as a tolda, and is built of planks around a crude but strong framework, so as to stand that hardest of usage, navigating among the rocks of the rapids.
>
> Except high up on the Guainia, where a species of crude bark craft obtains, the canoe of the Indian is always a dugout, called uba in Brazil and canao or bongo in Venezuela, varying in width from 18 inches to 4 feet and from a dozen or 15 feet to as much as 30 or 40 in length. One I measured at Santa Isabel was 52 feet long, fashioned out of a single tree. Far inland the uba, fitted with tolda, is also the long-journey boat, but on the lower reaches of the Rio Negro and the Amazon and the Orinoco one, two, or three board ribs are added to the gunwale, and it becomes montareia with the Portuguese and falca among the Spaniards. Paddles are much of a piece, with short, heart-shaped to roundish heads, and handles varying in length according to size of dugout, except on the lower Orinoco and Rio de la Plata, where the rough water requires always a longer handle as well as a larger blade. The batelão is propelled by oars from the top of the tolda, or from the deck, and by tracking and poling, according to the character of the river and whether you are going up or down stream.

Now, as to the method of propelling the batelão, a method slow but not always sure, we quote in extenso:

> My batelão was large and heavily laden, and, as I have said, we progressed by a species of tracking and by pulling and pushing along the forest-lined bank—a method of poling peculiar to the flowing road. Seven of the crew remained on the boat, Alleo, of course, at the tiller, and two, changed daily, for it was much the easiest task, scouted ahead in the uba for rocks or points where the hauling cable could be attached. Thus 6 men were always on the poles, divided equally as pullers and pushers. The puller used a 30-foot pliable pole having a natural hook at the far end, and it was his business to fasten onto some limb ahead, and, by walking down the length of the batelão, so help drag us forward. The pusher used a 20-foot stiffer pole, terminating in a short, stout fork, which by preference he fixed against the river bottom when he could reach, it or seated it against a limb of the passing trees. Sometimes as a pusher set his weight on the pole he went overboard amid the united shouts of the crew, and often there was a voluntary scramble into the water to secure a marsupial (rat animal), somewhat larger than a big prairie dog and fair eating, which had been hooked out of a tree; but more frequently there was a general plunge overboard to escape the attack of a vicious black-and-yellow striped wasp about the size of our honeybee, which assailed with the speed of lightning and the ferocity of a tiger and was not to be evaded. You could only protect your eyes with your hands and, for the rest, take what was coming, rejoicing that its habit is not to linger, but to sting in passing—a sting, I may add, like the touch of a glowing-hot point.

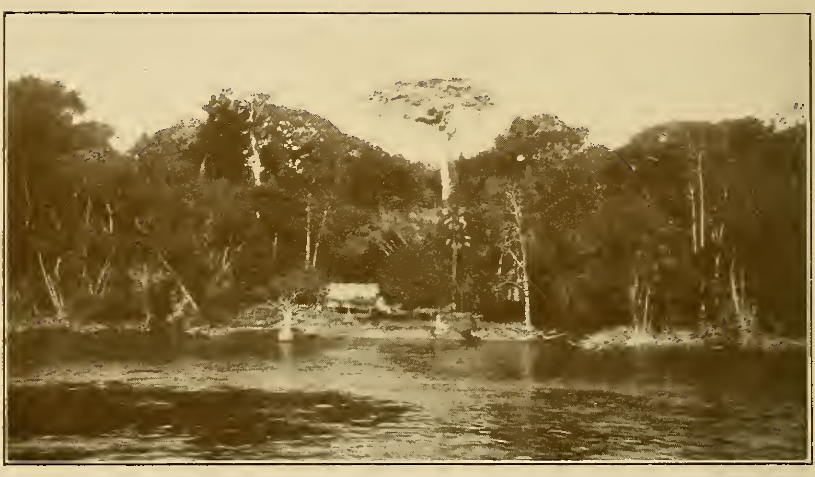


Photo by Caspar Whitney. Courtesy of Harper's Magazine.

A "CAMPO," AND CHARACTERISTIC BIT OF FOREST ALONG THE AMAZON.

> Not all my crew were skillful, yet one was a master. Standing at the bow, he would handle his pole like a 6-ounce trout rod, never failing to land upon an overhanging limb at just the right moment to draw the bow shoreward as it turned outstream because of sloppy work of a pusher walking astern. Here is the real skill in this kind of locomotion—to keep the boat going comparatively straight ahead, instead of swinging in and out in response to the individual efforts of the polemen. I have seen this particular man hook on to the roots under water not visible to my eye, or on to a log floating just under the surface, as does so much of the heavy Tropic driftwood. To decide at once, to hook instantly, to move as an endless chain down the shore side and up the stream side makes a good tracking crew and keeps the boat moving. And not the least necessity to fair batelão progress is honest work by the scouts in the uba, who have unexcelled opportunities for loafing and can easily make a difference one way or the other of several miles in the day's score. The uba carries about 100 yards of stout 3-inch cable made, as all rope is in this country, of the peissava fiber, which the scouts fasten to an advantageous point where the water is swift, or to the far bank of a bend, paddling back with the other end as fast as they can to the approaching batelão, where the men simply walk it in. This is a much swifter method than poling, raising the pace to 2 miles the hour. Occasionally on stretches where neither pole nor cable could be used we were obliged to resort to the oars, and then our rate of travel fell to the lowest, or not over a mile an hour, except when in the rapids the heavily forested banks enabled us to employ the combined poling and hauling, by which we averaged about one and a half miles.
>
> And whatever the method of progression these Rio Negro Indians were usually cheerful, the best-natured people I was ever among. They were always ready with a laugh, often singing at their work, if the rain was not too severe; like children, as, indeed, most wilderness people are. If one of the crew missed an overhanging limb and fell into the river, if the uba was caught under the cable and upset, the others indulged

in raillery. If the boat swung around at a rapid or broke away, requiring extra effort to repair the damages, every one laughed as he set to the task. They had good nature and patience in plenty, but more alertness and instant application of energy would have given less need of patience. Their way was to laugh while they viewed the barrel roll downhill, and then set to work to roll it up again, rather than to jump in to check its flight at the top of the hill. Such is their way and you must accept it when among them.

"**The Andean Garden of the Gods,**" by William V. Alford, F. R. G. S., which appeared in the Century Magazine for September, was briefly reviewed in this department of the BULLETIN in our September issue.

By courtesy of the Century, we reproduce some of the interesting photographs of this natural marvel in this issue, also giving extensive excerpts from the graphic descriptions of the scholarly author.

After giving the exact geographical location of this forest of stone, Mr. Alford proceeds:

Turning northward from Oroya, the traveler takes the Cerro de Pasco Railroad, and in less than three hours he sees, far to the westward, beyond the rolling pampas of the upper Andes, the dim outline of what has so far appeared to indicate a great forest.

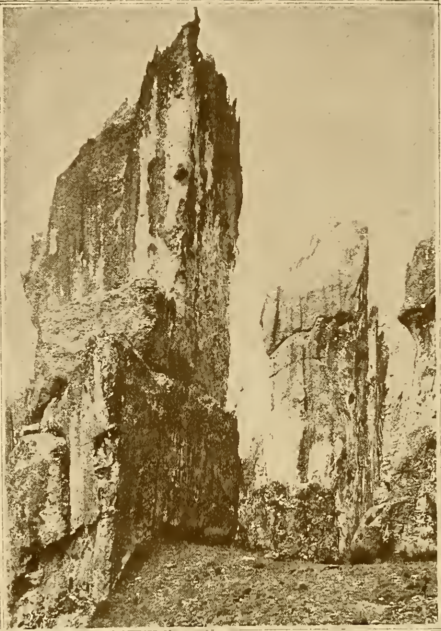
In riding toward it across the pampa, more than half the distance will be covered before any perceptible change is noted.

Photo by Caspar Whitney. Courtesy of Harper's Magazine.

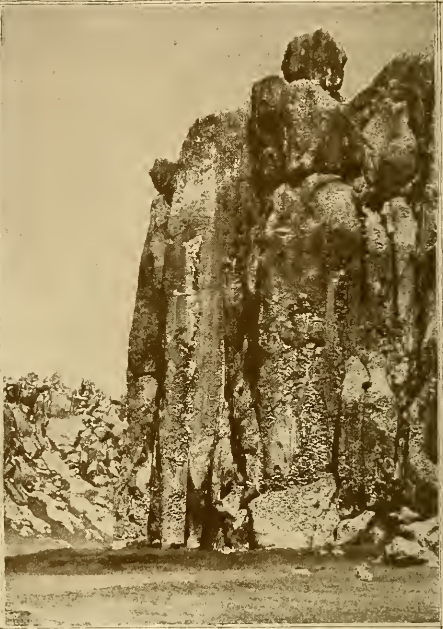
WORKING THE OARS FROM THE TOP OF THE TOLDA.

A closer view discloses a vast area, fully 20 miles long by 5 miles wide, thickly covered with grotesquely formed stones of all sizes and shapes. Some stand alone, like factory chimneys; others, like cathedral spires, jutting out from great masses of rock; while others, like Cleopatra's Needle and the great obelisks of the prehistoric ruins of Copan, dot the valleys that reach up into the Cordillara as thickly as the limbs that shoot out from the trunk of a tree. One's imagination need not be elastic to see in this Andean Garden of the Gods the beautiful façade of a Notre Dame, hundreds of petrified antediluvian reptiles, or myriads of veritable monuments. By their very proximity the large areas covered with such tall, spirelike stones stand out in sharp contrast to equal areas of low, scattered masses of rock. Again, in any one of these areas may stand groups of colossal columns, rising a hundred feet or more in the air, and not infrequently on their very summits will be seen balanced stones as large as a small cottage. This grouping of tombstones, columns, and cathedral spires is not isolated. So thickly strewn are they over this large area that if one particular stone is lost sight of, hours and even days would be required to retrace one's steps to the object sought.

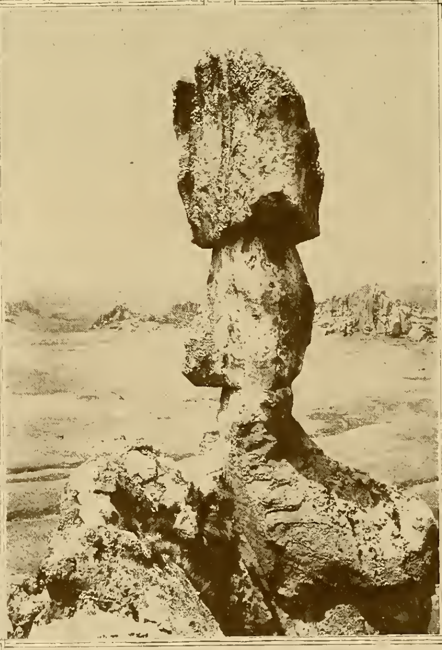
Narrow, irregular lanes, like streets walled in by skyscrapers, lead back from the vertical walls that often face the sides of the valleys. These lanes join others just as irregular, and continue their course up the sides of the hills to the backbone of the ridges. Standing on the summit of one of these ridges, the visitor may look down over the edge of a perpendicular cliff into an open court often a full hundred feet below. This court will be almost completely surrounded with stones of every shape and size. Possibly a break in the wall will permit the visitor to work his way down into the open space. If so, he will find it a wet, boggy piece of champa, from which a hundred tiny springs of water bubble up, cold and as clear as crystal, and highly impregnated with lime. The small stream of water finds its way to a larger stream in a broader valley. Out in this open valley, as level as a floor, and possibly a quarter of a mile wide,



TYPICAL VIEW IN THE ROCK FOREST.

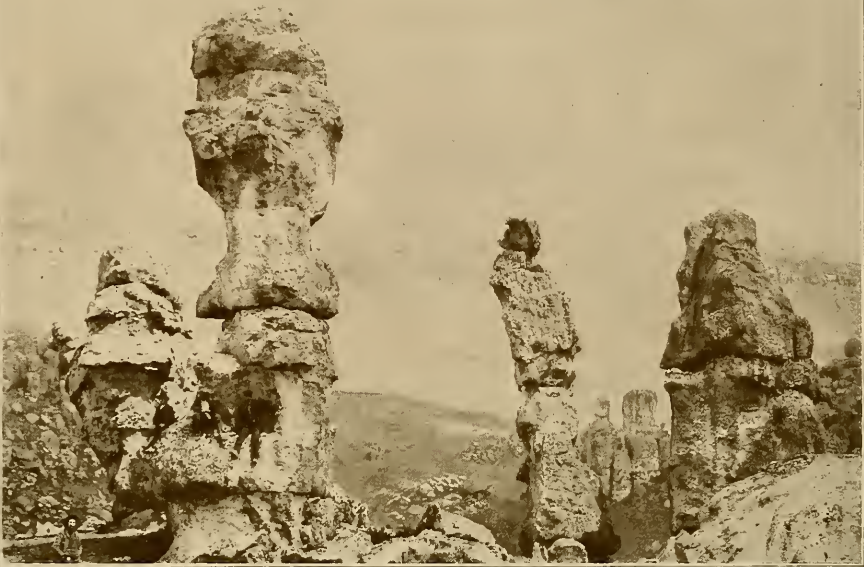


VERTICAL WALL 75 FEET HIGH.

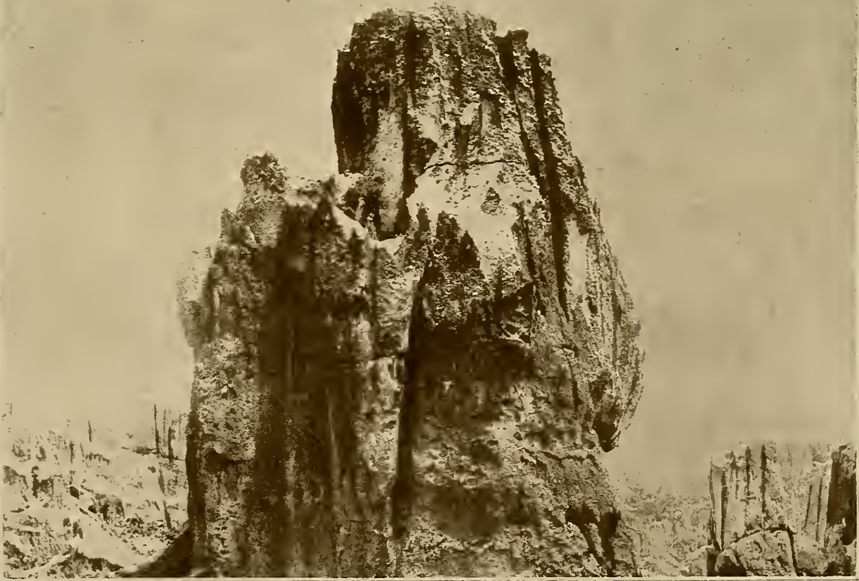


ISOLATED COLUMN ON THE MARGIN OF THE ROCK FOREST.

Photographs by William V Alford, F. R. G. S. Courtesy of The Century Magazine.



ON THE EDGE OF THE ROCK FOREST LOOKING ACROSS THE VALLEY TO A LIMESTONE RIDGE.



ONE OF THE SINGLE ROCKS 50 TO 75 FEET HIGH.

In one cluster there are nearly two hundred like this.

stand single columns of rock, like sentinels on the outposts of a sleeping army. Not one valley alone, but hundreds, cut this remarkable region into a thousand irregular plats, each vying with its neighbor in the wild beauty of confused and grotesque rock formation. The "Garden of the Gods" in Colorado boasts of a few spectacular rocks; but they are few in number, and the area which they cover is not large. The Andean garden covers nearly a hundred times the ground, and in beauty and interest surpasses its northern counterpart in the same ratio.

After describing various other very unusual and interesting features, the author closes with the following unique geological paragraph:

The topography of this region would be an interesting study, and to the geologist, almost a complete laboratory; and if he were skilled in reading the fragmentary records, he would have spread out before him torn leaves from many a volume. There would be a fragmentary volume telling of the quartz that forms the odd-shaped stones in the forest: chapters dealing with the limestone strata that have been pushed up, twisted, and bent; paragraphs telling the history of the sandstone ledges and granite walls that are thrown together in utter confusion. A singular geological feature is to be seen in one of the level valleys and close to a group of columns and spirelike stones. A limestone stratum has been pushed up and bent into a circle. The long chord of the arc, which is the circle of the ground, is nearly 500 feet, while the middle ordinate is approximately 50 feet. The stratification is almost vertical and is the only indication of lime rock in the valley. Other interesting features multiply as the geologist wanders through this labyrinth of stone figures. Sea shells are found here at an elevation of 14,000 feet. It almost seems as if nature had purposely hidden away on top of the highest Andes a library of world history, telling of its making.

Photo by Lieutenant Pedro Emerson. Courtesy of The Outing Magazine.

THE SOUTHERNMOST

A view of the lone government station on Staten Island in the gloomy twilight

"**The Toll of The Straits**," by Charles Wellington Furlong, F. R. G. S., appears in the October Outing. This article by Mr. Furlong, the well-known traveler, geographer and author, who also has a contribution in this issue of THE BULLETIN, is a collection of "Stories of Storms, Wrecks, and Castaway Crews in the Fuegian Archipelago and the Patagonian Channels."

The stories are of absorbing interest and tell of the actual hardships endured, the terrible dangers encountered, and the many incidents where lives of the adventurous spirits who have braved these perils have been sacrificed. The article abounds in vivid and realistic descriptions such as the following:

In the Fuegian Archipelago, through which doubles the Strait of Magellan, as in the Patagonian Archipelago which runs up north on the west coast, wild, desolate mountains, reeking with wetness and crowned with ice caps, shunt huge glaciers down their valley ways into the cold currents of the channels. Across these wondrous peaks almost eternally move storms, ever transforming winter and summer, the inimitable panorama, sending snow and rain squalls sweeping, shrieking over the mountain peaks and down through the valleys and waterways, where live the wild seabirds, Antarctic mammals, and the southernmost human inhabitants of the world, the Fuegians.

On the most barren rocky western side the tremendous combers of the stormy southern Pacific ceaselessly boom and break against the outlying islands and from "The Horn," south, dangerous bergs and ice floes disintegrate from the great ice barrier and menacingly swing up with the Antarctic current across the path of shipping.

The prevailing southwesterly winds sweep up from the Antarctic, cold and wet laden, and meet the great Cordilleran barrier of the southern end of the Andes, which terminates with a swing eastward in Cape Horn. These ranges rise like colossal, insatiable Bacchi among the clouds and mists to deprive the winds of their moisture. which then pass on and rip across the dry pampas of Patagonia beyond. The winds among the labyrinthine channel ways are turned and dropped fitfully in countercurrents and "williwaws" by the interposing mountains and valleys. This causes local conditions of weather in the archipelago to be varied and spasmodic.

LIGHTHOUSE IN THE WORLD.

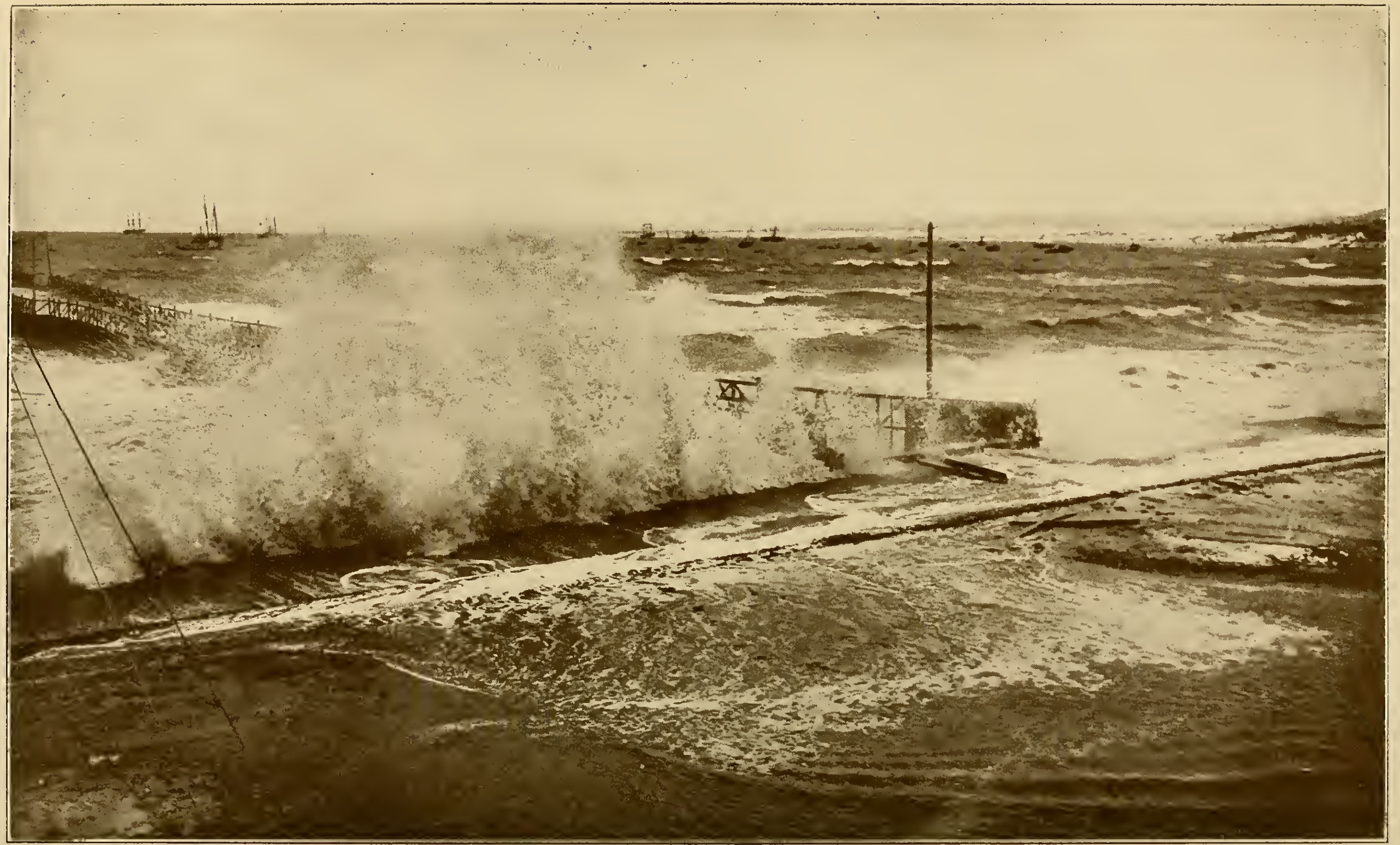
of the Antartic winter. Note the distant barren, mountainous coastline.

In speaking of the dreadful sacrifice of human lives occasioned by the perils of this storm-swept, icebound region Mr. Furlong continues—

The history of the toll of the Strait of Magellan began when the first primitive canoe capsized and fatally spilled its dark-skinned Amerinds into the icy waters of this southern archipelago. The first white man's toll was paid on his maiden passage through the strait by the man whose name the strait now bears, and the price exacted was one of the flower of his fleet and the desertion of others, which turned tail for home before the bitter blasts from the western unknown.

Since that long 300 years ago these wild, forbidding regions have exacted their heavy toll of life and property from every maritime nation of the globe which has sought to use these "ends of the earth" as a highway. The very names given by explorers to these parts are a clue to its history and character—Mount Darwin, Beagle Channel, Mount Sarmiento, Desolation Island, Thieves Bay, Port Famine, Mount Misery, Unfit Bay, Last Hope Inlet—in many cases spelling tragedy in its worst forms.

The author then gives graphic accounts of vessel after vessel wrecked, entire crews lost, lives sacrificed under terrible and almost incredible suffering, providential escapes,



Courtesy of the Outing Magazine.

THE WATER FRONT AT PUNTA ARENAS.

Strong gales from the south and east often pile the water furiously against the front of this little Strait settlement town.

etc., and we wonder why any mortal being should take such risks until we read his closing paragraph—

> No one can appreciate the manifold treacherous fates of these regions which seemed perched on every rock and swirling in every current, until he has experienced the impenetrable night gloom, fog, cloud-bursts, and snow, sought anchorage in the swift currents where there is none, felt the bitter penetration of sleet and rain in moisture-laden wind, suffered in the splash of the icy brine, or buffeted ceaselessly for days on monotonous combers of the storm-swept Antarctic and southern Pacific; tramped starving and faint through the impenetrable forests and treacherous mushy bog lands from which they grow, or alone seen the wolflike glint steal into the eyes of his Fuegian companions.
>
> But for all that, to a man of red blood, who loves the open, who feels a thrill in the storm slap on his cheek, in the healthy contest against the endurance of the savage over rugged trails of their own land; who loves the beauty and grandeur of the great shafts of ice-pinnacled mountains and in the great, gray clouds of the storms which bowl over and across them; in the lashings of the waters upon the mighty rocks and the halftone silhouette of great islands in the mists; of still, protected channel ways into which spill enormous blue-green glaciers and where sport the whale, sea lion, sea otter, penguin, and innumerable birdlife—this land and its life with only its occasional bursts of sunshine which reveal through the dustless atmosphere glimpses of the clear, blue vault above and turn the scarlet flowering muggoo into a flame of red against the green setting of its background of beeches through which buzz hummingbirds and parroquets whir and screech among the branches within a few miles of Cape Horn, sends out an irresistible call.

"**The New Era in Our Relations with Latin America**" is a nine-page article by Judson C. Welliver in the October "*Munsey*." The author's thorough familiarity with the histories of Latin American countries and his close and intelligent study of present conditions obtaining there, as well as his appreciative recognition of some of the great men of these countries warrant the following excerpts from the article.

In dealing with an unjust and highly prejudiced article published in the South American supplement of the "*London Times*," Mr. Welliver gives the people of the United States the following dose of advice as well as of information:

OUR IGNORANCE OF LATIN AMERICA.

> In the first place, as a measure of national security, with the purpose of minimizing the possibility of untoward complications, we need to overcome prejudices fomented by constant dissemination of such appeals. We need to understand the South Americans, in order to get them to understand us. Their history should be taught to our children. Their great national heroes, Bolivar, Sucre, San Martin, O'Higgins, Lynch, Morazan, Artigas, Prat, Dom Pedro, and the rest of them, ought not to be unknown to us. I make bold to venture that few readers will recognize more than one or two of these names; yet in their own countries they stand for about what Washington means to us.
>
> Are the South Americans ignorant of us, or we of them? I find answer in a copy of "*El Mercurio*," the leading newspaper of Santiago, Chile, which lies before me. It contains more cabled news from the United States than I ever saw from all South America in one of our newspapers.
>
> We know more of the fabled piracies of Benito Bonito than we know or care to know about the heroism and the campaigns, the sacrifices and the sufferings of Bolivar, Cochrane, Juarez, and O'Higgins.
>
> We have read about the pirates' cache of stolen gold on the Isle of Cocos, but who takes the trouble to learn about great empires of temperate plains and table-lands waiting only to be tilled in order to teem with riches?
>
> We turn to New Zealand as the sociological testing laboratory of radical creeds, all innocent of the fact that in little Uruguay the Government is nationalizing all the insurance—life, fire, agricultural, maritime, health, accident—is nationalizing the telephone, the telegraph, and all municipal facilities; is creating a State monopoly in distilling; and is arranging to go into partnership with our American meat trust in the establishment of a huge modern stock-marketing and meat-packing business such as you may see in Kansas City or Sioux City.
>
> Just a suggestion of the interests that await the student of South American public men of to-day. Imagine a youth who at 18 inherits one of the greatest fortunes in his country. At 36 he has been three times its minister of foreign affairs; he is its leading publisher, operating a string of its greatest daily newspapers; he has been the popular party's candidate for President, and, though defeated, put that party squarely on its feet; he has multiplied the fortune he inherited until to-day his annual revenue exceeds the principal he first received, and makes him one of the world's richest men. With all this, he is at the moment highly successful as his country's ambassador in London. There, in a sentence, is Augustine Edwards, of Chile.
>
> Perhaps you prefer the career of Ruy Barbosa, of Brazil, widely accounted the foremost senatorial publicist living to-day. His greatest feat was his championship of the principle of equal representation for all nations in the proposed Hague arbitral court. He did not finally win, but he conclusively defeated the principle of unequal representation.

> You will have heard of Carlos Calvo, author of the Calvo doctrine, which proclaims the finality in international affairs of the judgments of local courts; compiler of the world's greatest array of diplomatic precedents. No foreign office could possibly get on without this work of an Argentine statesman.
>
> Or turn to Rio Branco, another contemporaneous South American statesman; a baron of the old empire; now Brazilian minister of foreign affairs; widely estimated "the strongest man in South America."
>
> Such are the men who ornament South American statecraft of to-day. For romantic careers of our own citizens in South America, contemplate Henry Meiggs. He fled from San Francisco to Chile a defaulter, built the railroads of that country and Peru, made and lost four huge fortunes, and died in his exile almost poor because, though he had long since repaid his defalcation, the indictment was always held over his head. On one of the railroads he built, the Central of Peru, you may be whirled through a tunnel 1,000 feet higher than the summit of Pike's Peak.

Again, in speaking of Latin-American countries as leading the world in the settlement of international disputes by arbitration, Mr. Welliver pays them the following well-deserved tribute:

> PIONEER WORKERS FOR WORLD PEACE.
>
> We read about President Taft leading the world toward the new era of arbitration, when war shall cease and the parliament of man shall rule; and we felicitate ourselves on our citizenship in a country so nobly inspired, so humane and altruistic. We might do well to study the history of South American devotion to the principles of arbitration; to know that nowhere else are so many and difficult questions settled by peaceful methods.
>
> No other continent has ever come so near to establishing a family of nations in peaceful accord under the rule of justice, good sense, and mutual concession. Chile and Argentina, at the very time when their relations were most strained over a great boundary dispute, signed an agreement for the limitation of armaments, and proceeded to enforce it. Their dispute was settled by arbitration, and an American diplomat, William I. Buchanan, is to-day looked upon as a sort of patron saint in both countries because of the special skill and success with which he acted as mediator and brought the controversy to a determination completely satisfactory to both sides.
>
> South America, indeed, will one day be recognized as having led the world in the direction of pacific settlement of international difficulties. The great Simon Bolivar, when President of Colombia, wrote arbitration provisions into his treaties with neighboring States. In 1826 he called a congress of all the Americas at Panama. The plan of general amity and arbitration seemed visionary to the practical statesmen of the United States, and this nation was not represented. Those that did attend joined in agreement to arbitrate all differences. The treaties based on this agreement were not ratified, but they are nevertheless a historic landmark on the road to general acceptance of peaceful methods of adjusting international disputes.
>
> In 1848 the States of the west coast adopted an arbitration and mediation plan; and various other congresses of Latin America took related steps, clearly trending in the same direction, and far in advance of the program long afterwards formulated at The Hague.

This is giving credit where credit is due, and we have taken the liberty of quoting thus extensively from Mr. Welliver's article to show our Latin-American readers that some of the ablest and best-informed writers in the United States are becoming familiar with and appreciative of the older civilization south of their own great country.

"**The World's Greatest Waterfall: The Kaieteur Fall, in British Guiana,**" in the September number of "*The National Geographic Magazine*" is a delightful narrative by Leonard Kennedy of his trip on the Demerara and Essequibo Rivers into the interior of British Guiana.

The journey was undertaken for the sole purpose of viewing the magnificent Kaieteur Fall, and from the description and beautiful views obtained by Mr. Kennedy he was well repaid. Beside this almost unknown natural wonder the magnificence of Niagara almost pales into insignificance, for the Potaro River at the brink of the fall is 369 feet wide and the drop is 741 feet, or about five times that of Niagara.

Mr. Kennedy's story is embellished by a map and six beautiful views of the fall. As an example of the author's graphic descriptions we quote the following:

> I was greatly impressed by the softness of the monstrous fall. A smooth but rapid river nearly 400 feet wide flows quietly to the brink and turns quietly downward. In its fall it breaks into soft white mist and reaches the bottom in a chaos of seething clouds. There is a gentle roar. Only now and then a deep thunderous growl arose from the hidden caverns at the bottom, giving some idea of the forces which contended there.

In the "*South American Journal*" of April 29, 1911, appears an editorial under the caption "**Central American Trade,**" which is based on the very able and eloquent address delivered by Sr. Don Joaquin B. Calvo, Minister from Costa Rica to the United States, before the Pan American Commercial Conference.

We note with pleasure that this influential publication turns to such an authoritative source for its information, since probably not one of Central America's able statesmen is better informed as to the marvelous resources and the actual conditions obtaining in the whole of that section of America than is the distinguished minister from Costa Rica.

The editorial includes the tabulated statement of the foreign trade of Central America for 1909 as taken from Minister Calvo's address and comments on the fine commercial showing made, especially by Costa Rica. While the editor is complimentary it strikes us that he fails to fully appreciate the significance of the fact that the foreign trade of that country, notwithstanding extremely adverse conditions as to heavy rainy seasons and a severe earthquake, amounted to over $38.80 per capita. What a striking attestation to the industry of this remarkable people.

In the "*Tea and Coffee Trade Journal*" for September appears a most interesting article entitled: "**All About Mexican Coffee,**" and the title is not a misnomer by any means, for Mr. C. H. Stewart, the author, is an expert in the coffee line, and what he leaves untold about the cultivation and preparation of coffee in Mexico can hardly be worth the telling. He enters into every phase of the industry—from the selection of the bean for planting, the care of the young plants in the nursery beds, setting out the plants in the fields, nipping and pruning, shading, system of planting, etc., and finally winds up with the bagging and transporting of the finished product.

The article is profusely illustrated, and the publishers state in the caption that it is the first really complete article on the cultivation and preparation of coffee in Mexico that has ever been published in English. It is undoubtedly a most valuable contribution, not alone to those directly interested in the industry, but also to the general reader who values authoritative information on one of Latin America's chief products.

Another timely article in the same issue of this publication is by Clarence E. Edwards under the caption "**Investment in Mexico.**" Mr. Edwards starts out with the following strong language: "For a safe, sane, and profitable investment there is no country offering more opportunity than the Republic of Mexico." He then divides the article into three subheadings in line with this opening: "Safety in investment, sanity in investment, and profitable investment," and when the reader gets through with the article he feels as though he were losing time by not taking the next train for Mexico.

"**Mineral Wealth in Peru**" is an interesting contribution by Consul General Robertson in the August number of "*The American-Asiatic Journal of Commerce.*" The article treats of the extraction and reduction of copper minerals, silver mining, gold mining, and the production of petroleum and will astonish the uninitiated reader with its facts relative to the wonderful mineral resources of Peru.

In the "*American Exporter*" for October will be found good likenesses accompanied by biographical sketches of Frederick T. F. Dumont, recently appointed consul at Guadaloupe, and George F. Davis, consul at Ceiba, Honduras.

The scholarly countenance of Mr. Isaac A. Manning, recently transferred from La Guayra to Barranquilla, also appears in the same number.

"**The Pageant Celebration**" by Irvin Graham Lewis in the September "*Scenic America*" of San Diego, Cal., is an ably-prepared and well-illustrated article descriptive of the ceremonies and celebration of the ground-breaking for the Panama-California Exposition.

The following notes relative to "**Railway Progress in Latin America**" are taken from the article appearing under that caption in the "*Railway Gazette*" of August 18, 1911:

The following paragraph relating to railway construction in Chile should be something of an eye opener to those who are not yet awake to the marvelous progress being made in Latin America:

> Apart from the most important of all these undertakings, namely, the Longitudal Railway, there are some 30 different railways being built at the present time in the Republic of Chile. The total distances to be covered will exceed 1,500 miles and the approximate cost will be $281,000,000, or £21,025,000 sterling. Of this amount some £1,000,000 is to be expended during the remaining few months of this year on the necessary rolling stock, which will be placed on completed lines. When we remember that several hundred kilometers of private lines are likewise contracted for in connection with certain concessions which have been granted to individuals, and that all these will have to be equipped, it is clear that Chile will rank as one of the most valuable markets for manufacturers of railway rolling stock and material for a considerable time to come. Within the period of 90 years the Chilean Government will have become the owner of all of these new lines according to the terms of the concessions on which they are being built.

The construction of the Arica–La Paz Railway, which is in the hands of Sir John Jackson and Mr. Norton Griffiths, M. P., is making such excellent progress that it is expected to be completed well within the stipulated contract time, and this in spite of the exceeding heavy engineering work which has had to be carried out. The inauguration of the new railway is already the subject of much public discussion, and it seems likely that the occasion will be distinguished by a celebration of an international character. The Presidents of both Chile and Bolivia are expected to be present at the ceremonies.

The three railway extensions which have been undertaken in Peru—the Sicuani to Cuzco, the Oroya to Huancayo, and the Yonan to Chilate—have now been completed or will be in the course of a month or so. The total estimated cost was put at £1,130,000, and up to the time of the last report this amount had been expended within a very few pounds.

The Peruvian Corporation has undertaken to carry out for the Government of the Republic a survey from the Cuzco extension of the Southern Railway to the navigable waters of the Madre de Dios River. Under the terms of the contract the corporation has, for the period of three years after the completion of the survey, the preferential right to construct a railway with a State guaranty of interest on the capital employed and a grant of 2,000 hectares of land per kilometer of line constructed.

The section of new line which has been undergoing construction by the Midland Railway of Uruguay has at length been put into operation, although formally opened for public traffic some two months ago. It is a section of 153 kilometers in length and brings the town of Algosta into connection with the important meat-curing town of Fray Bentos, the headquarters of the Liebig Extract of Meat Co. (Ltd.). Only some 34 kilometers remain to be completed.

Ecuador is keeping up with the procession in railway building. The new line running from the excellent port of Bahia de Caraquez to Quito, the capital, has been opened for a distance of 55 kilometers to Calceta. Surveys from the port of Guayaquil to Bazar and also of the new Chone branch have been completed. Electric lighting has been proposed on an extensive scale in connection with the port of Bahia de Caraquez, which it is believed will become eventually an important commercial center.

"*The Pacific Northwest Commerce*" for September contains a short but striking article by Hon. John Barrett, Director General of the Pan American Union, under the caption "**Seattle Must Get Ready for Panama Canal.**" Mr. Barrett urges the improvement of the harbor, port, and terminal facilities of Seattle, in order that this important city with its strategic location on Puget Sound may reap the benefits of the new commerce which is sure to develop from the opening of the Panama Canal. Incidentally he mentions the fact that Valparaiso, the principal Chilean port, is about to expend $15,000,000 in providing itself with a suitable harbor to handle the trade of the canal.

The manufacturers and exporters of the United States are again taken to task in a pointed article in the September number of "*Advertising and Selling*" by J. W. Davies, entitled "**South American Trade—Why Americans Fail and Germans Succeed in Securing It.**"

Says Mr. Davies in his introduction:

> The American manufacturers are almost entirely to blame for their failure to procure a larger volume of the vast trade awaiting them in South America.
>
> They can not possibly complain of lack of information. The International Bureau of American Republics, ably managed by the Hon. John Barrett, is continuously and persistently calling the attention of Americans, both by speeches and endless literature, to the great opportunities for export trade in South America.

Lack of space forbids extended quotations, but an incident narrated in the article under the subcaption "He knew his business," is so enlightening on Latin-American business methods that we are constrained to reproduce it in full:

> To revert to my German friend. He was a clean, fair-haired, dapper little fellow with keen, blue eyes. I had noticed him on two or three occasions perambulating up and down the streets, with a notebook and pencil in hand, making inscriptions whenever he encountered a hardware store. One morning he entered one of the leading hardware stores in which I was standing in conversation with the proprietor. As he entered he politely took off his hat, and in perfect Spanish deferentially asked permission of the merchant to view the store. "With great pleasure," replied the merchant.
>
> A little later the merchant approached the young German and asked, "Are you interested in my goods?" Immediately taking off his hat, the young man replied, "Yes, sir; very much; you have a grand assortment here." This, of course, tickled the merchant. "Are you a merchant yourself?" he asked. "Yes, sir; I represent a German house in Hamburg."
>
> "In what line, sir?"
>
> "Domestic utensils and novelties."
>
> "Ah, yes! Have you any samples with you?"
>
> "Yes, sir; at my hotel; may I have the pleasure of bringing them to show to you?"
>
> "Oh, thank you, sir; with great pleasure I will visit your hotel, and it will save you the trouble."
>
> An appointment was made, and before departing, uncovering his head again, the German thanked the merchant profusely for his kindness, inquired about the health of his good family, and, of course, his own, made a few pleasant remarks about the city and the weather, and departed.
>
> A few days later I learned that this merchant had not only given him a large order himself, but had induced some of his friends to give him good orders also.

The little details of courtesy and politeness pay in dealing with the merchants of Latin America.

In the "*Engineering News*" of September 7 appears an interesting article on the "**Preliminary Surveys for the Puebla & Pacific Railroad of Mexico**" by H. N. Roberts, assistant engineer.

The article deals largely with the technical features of the survey, the engineering difficulties to be overcome, etc., but also incidentally brings out facts relative to the mineral and agricultural resources of the country to be opened up. It seems the extensive coal and iron-ore deposits in the State of Oaxaca, in that part known as the Mixteca country, were investigated in 1906 by Mr. A. B. Adams and the formation of the Oaxaca Iron & Coal Co. for the exploitation and development of these rich deposits resulted. A Federal concession, granting a subsidy of 12,000 pesos per kilometer, was secured and the Puebla & Pacific Railroad Co. was organized. The route selected, with Puebla as the northern terminus, extends in a direct line south to the Laguna Chicahua, the Pacific end of the road, which affords an excellent landlocked harbor.

The road will open up a rich agricultural section, corn, sugar-cane, watermelons, cotton, tobacco, tropical fruits of all kinds, and valuable hardwoods being the principal products.

"*The Pacific Marine Review*" in its June issue gives on its editorial page quite an extended excerpt from the address of Mr. John Barrett, director general of the Pan American Union, delivered at Peoria, Ill., and adds thereto some very complimentary comments. In the same number is reproduced in full Mr. Bernard N. Baker's address before the Pan American Commercial Conference: "**How can we realize the benefits of the Panama Canal?**"

In the "*American Exporter*" for October appears a reprint from "*Printers' Ink*" of August 24, 1911, of a timely article by Franklin Johnston entitled: "**Business Methods in the Export Field.**"

Mr. Johnston deals chiefly with the matter of United States manufacturers and exporters and their methods of getting and handling export business with Latin-American merchants, and proceeds to take a fall out of some theories relative thereto in the following manner:

> Is it true that American manufacturers fail to get their full share of export business because they adopt the same business principles and methods abroad that they do at home? I believe precisely the opposite is true—that those manufacturers fail to get their full share who do not adopt the same business principles and methods abroad that they do at home.
>
> This is a somewhat revolutionary statement to make, for one of the most persistent of the glittering generalities which the editorial-writing and after-dinner-speaking schools of exporting have given us is "Export business is different. You can not do business abroad in the same way you do it here."
>
> As applied to the basic principles of selling goods that formula is untrue.
>
> As applied to the petty details of selling in a given country it is doubtless true. True also to the extent that you can not do business in Constantinople the same way you do it in Mexico City, and so on ad libitum.
>
> My own impression, after several thousand miles of foreign traveling and study of conditions affecting sales of American manufactured goods, is not how different business is abroad but how similar.
>
> Common-sense business methods, energy, making good, and printers' ink count the world over. All the difference in minor details in various localities will be taken care of by common sense. The language of business is like the language of love, pretty much the same the world over. The race which has produced the greatest merchants is the race without a nationality.

He cites instances where exporting concerns in the United States made strangely careless and unbusinesslike mistakes which they would have avoided had their methods with the foreign merchant been as well considered and as carefully handled as their domestic business.

The article is full of good hard sense and should be read by those who are in the exporting line or contemplate entering the field.

"**Opportunities For Americans in Panama,**" by Forbes Lindsay, in October "*Lippincott's,*" is a most enticing article for the opportunity hunter. Such paragraphs as the following, written by one who has "looked, stopped, and listened" while there, makes one think that the country must be a veritable El Dorado.

> Cattle raising in Panama is a field of endeavor which a man may confidently enter into with $5,000, or even less. He can hardly fail of success. He may count on tripling his investment in five years, with a greater ratio of enhancement thereafter. This statement is not based on mere surmise, but on actual experience of Americans and others.
>
> The best returns are to be had from the cultivation of long-time crops, such as rubber, cacao, coffee, and cocoanuts. None of these will begin to yield returns short of six years, but soon after then will afford a life income, representing an enormous percentage of profit, with little further expense or trouble. The man of moderate means can best achieve the desired result by combining a short-time crop and a long-time crop, such as bananas and cacao, or sugar and cocoanuts.

"*The Engineering and Mining Journal*" for September contains an article on "**The Cost of Mining in Nicaragua,**" by Henry B. Kaeding, general manager of the Siempre Viva Mining Co. of Nicaragua. In the article are given cost sheets and details showing total cost of production, and though the Siempre Viva mine is situated in a remote district of Nicaragua and the cost and difficulties of bringing in supplies are great the total cost of mining and milling is low.

"**Religious Rites of the Aztecs**" is an interesting study of the religion of the Aztecs and something of a rather thinly veiled attempt to argue a common origin for all religions, appearing in the September number of "*The Pan American Magazine*" and written by Fielding Provost, the author of "Gods of the Aztecs," which was published by the same magazine in the August number.

"**The Temple of Viracocha**" is an interesting article in "*The Inca Chronicle*" for July, by H. E. Blackett. It is descriptive of the ruins of the old temple and gives pictures of the sections of the walls still standing.

Dr. A. Petermann's Mitteilungen aus Justus Perthes' Geographischer Anstalt is one of the best-known and trustworthy geographical publications in the world and every page is readable. Seldom a month passes without some article on Latin American geography, ethnography, or exploration, and the last several numbers have carried contributions to our knowledge on this part of the world, which should be noticed. In March and April, 1911, is an exhaustive review of the recently published study of the Lesser Antilles, prepared by P. Chemin-Dupontès. A comparative table of all the islands belonging to European powers is given on page 182 (April, 1911), in which the commerce, size, rainfall, and population are stated. As apparently so little is offered on these isolated spots lying between North and South America, this compilation is worth remembering. In the June, 1911, number, the northern portion of the Province of Mendoza, Argentina, is described and a map prepared from original sources is given. The Cordillera between Mendoza and Jachal Rivers is a region not well known nowadays, but with the increased interest in that region and the possibility of a railway between Argentina and Chile across one of the northern passes, such preliminary studies are valuable. In the same number an analysis is given of the trip made by Dr. Hamilton Rice in Colombia, from July, 1907, to April, 1908, southeasterly from Bogota along the Rio Caiary-Uaupes River into Brazil. In August, 1911, Dr. Eduard Seler gives a critique of a report on the economical condition of the Indians of Guatemala under the changing forces at work since 1903, and discusses the economic conditions under which they live.

"**Some Historical Notes on the Guanajuato District**" is an article by Herbert A. Megraw in "*Mining and Engineering World*" of September 16, 1911. It gives an account of the earliest history of the district in general but more especially of the various mines, some of which have been known since the seventeenth century.

"**The Big Job,**" the fourth of a series of articles by Albert Edwards, appears in "*The Outlook*" for October. It gives a very graphic and realistic picture of things as they are at the Panama Canal and is embellished by no less than nine good illustrations.

BOOK NOTES

The Hidden Empire; A Tale of True Deeds and Great Ones Which the Tropic Sun Witnessed. By R. W. Fenn, with illustrations by M. Leone Bracker. New York. Dodd, Mead & Co. Price, $1.30 net.

Before reading this volume we were disposed to give it a cordial welcome, for we have long desired to see our men of letters begin work in the greatly neglected but passing rich literary fields of South America. Among these fields one of the most promising is the land wherein is laid the plot of the greater part of the author's story. It is connected with the conquest of New Granada by the illustrious commander, Gonzalo Jimenez de Quesada, who among the conquistadores takes rank with Hernando Cortes and Francisco Pizarro.

The author's theme is a noble one and worthy of the pen of the most ambitious writer. It deals with one of the most thrilling episodes of the Spanish conquest and counts among its leading characters some of the most daring and chivalrous characters of the period of the conquest. First and foremost among these was the Licentrate Gonzalo Jimenez de Quesada, who knew how to wield the pen as well as the sword, and to whom we owe much of our knowledge of events in which he took so conspicuous a part, and in addition to being one of the most able and successful of the conquerors he was also one of the most humane, and as such is deserving of special recognition.

The author had a rare opportunity to achieve distinction as a writer, but because he has failed to make proper use of the splendid material at hand he has given us a book that is far from being satisfactory. He has done justice neither to his subject nor to Quesada and his gallant companions in arms.

For the historical part of his story he follows Padre Simons's Noticias Historiales, but he gives us little more than the dry bones of the learned Franciscan's stirring narrative. And in lieu of the noble and commanding figure of Quesada, as portrayed by his first biographers, Juan Rodrigues Fresle, a son of the conquestadores, and Juan de Castellanos, who took a distinguished part in the brilliant campaign, of the conqueror of New Granada, we have in the work before us a suspicious, cruel, vaccilating leader, who is toto caelo different from the man who was the idol of his soldiers and the admiration of his contemporaries. As for the gentle conquestadores of the cross, who accompanied Quesada, Mr. Fenn, in defiance of the teachings of history, presents them to us as little better than blind and heartless fanatics.

Then again we miss the local color of the wonderful region through which the conquerors marched on their way from the great river, the Magdalena, to the sabana de Bogota; and from the plateau to Mariquita. We see little or nothing of the marvelous forests through which they cut their way; nothing of the stately palms and gorgeous orchidaceous growths, which are still the delights of every beholder. We have but a glimpse of "jungles throating thunder" and of thickets in which eyeballs gleam, and nothing at all of the sublimities of the Suma Paz and the glories of old Sargento and Tequendama. So far as natural scenery of the book is concerned, or the peculiar fauna and flora which have their habitat in the country described, they, with few exceptions, differ but little from what one would find in the everglades of Florida or in the uplands of Saskatchewan.

As to the hero and heroine, their actions and adventures so frequently overpass the bounds of verisimilitude that one fancies that one is reading Walpole's Castle of Otranto or following the checkered career of Triana and Amadis de Gaul.

The author tells us of masses of writings and documents that were burned by the ignorant fanatics that accompanied Quesada on his victorious march. He has evidently followed the fanciful but discredited theory of Duquesne, according to whom the intellectual status of the Chibchas was as high as that of the Aztecs of Mexico or of the Incas of Peru. The truth is, as has been incontestably proved by the noted Colombian writers, Dr. Liborio Zerda and Sr. Vincente Restrepo, not to mention other modern investigators, that the Chibchas had no writings or documents of any kind, and for the simple reason that they had not even the semblance of an alphabet either figurative, symbolic, or ideographic.

It may be said that we are here dealing with a romance and not with a history, and that writers of romances, like poets, have privileges not accorded to historians. This is true in works of pure imagination, but in a historical romance like the one before us, which professes to give us a truthful picture of the conquest of New Granada, one may not with impunity go counter to the well-ascertained facts of history either in one's portrayal of individuals or in one's account of events in which they took part, especially as, when in the present instance, details have been transmitted to us by the early chroniclers with such scrupulous exactness.

Orientaciones Necesarias. Cuba y Panama.[1] By Dr. F. Carrera Justiz, minister of Cuba to Mexico and professor of law at the University of Habana, ex-minister of Cuba to Spain and to the United States. Habana, 1911. 435 p. Illus. 6¼ by 9.

The author of this large volume, bound in paper, is known by his numerous works on political economy. His position of professor of law in the University of Habana must necessarily add prestige to his name, while the responsible diplomatic offices he has held, and which he still holds, will, of course, add weight to his authority. Dr. Carrera Justiz has been minister of Cuba in Spain and in the United States, and he now fills the position of minister plenipotentiary of his country at Mexico.

The work is brimful of historical information, giving, as it does, the history of the Panama Canal from the first attempt to discover an open sea on the west coast of America to the present moment. The main object of the work, however, is to show the relation of the Panama Canal to Cuba and the effect which must be produced upon that island by the union of two oceans.

Almost at the beginning of the work, the writer starts out to defend the thesis that by undertaking the building of the Panama Canal, the United States has completely departed from its time-honored doctrine. This departure is to be found in the necessity of the United States entering into world politics, contrary to the first principle laid down by Monroe. It is precisely the interpretation of the Monroe doctrine in its relation to the canal that has been the motive of the book. The canal being of supreme importance to Cuba, the author finds it necessary to create on the subject an enlightened public opinion in his country. It fits into his plan to advocate strongly that Habana be the next place of meeting for the Pan American Conference, as was suggested at Buenos Aires.

The necessity for the creating of this public opinion lies in the fact that the Panama Canal may create for the island advantages as well as disadvantages. While a beautiful perspective stretches before her, it is not without serious dangers. Hence it is that, for the outlining of her political program in foreign affairs, Cuba should pay special attention to Panama and its canal. The effects on the island of Cuba of the completion of the canal must be sought for in the sovereignty of the United States over the Canal Zone, and in the complications likely to ensue therefrom in the fact that China and Japan will be brought nearer to the West Indies, and in the increased activity that will necessarily take place in the Caribbean.

The artistic and historical value of this book is enhanced by 38 engravings among which are portraits of distinguished men who stand more or less related to the Panama Canal, beginning with President Monroe and ending with the Japanese marshal, Oyama. We note among the portraits those of such men as Blaine, Carnegie, Roosevelt, Taft, Root, Barrett, Amador, Goethals, and Menocal. Of course, de Lesseps is there, too, a sad memory of a gigantic enterprise.

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[1] Charles Warren Currier, Ph. D.

Random Sketches in Spanish-American Literature. Recent additions to the literary history of Chile.[1] Biblioteca de escritores de Chile. Vols. 2, 3, 4, 5.

The writers of this series, of which we reviewed the first volume in the April number of the BULLETIN, are working fast, for I recognize their binding in the four neat blue volumes, with red and gold stamps, that have recently come to us. They give us works of the brothers Justo and Domingo Arteaga Alemparte, of Isidoro Irrazuriz, and of Vicente Perez Rosalez, names prominent in the literary history of Chile in the past century.

The Arteaga Alempartes, journalists of note and of intense labor and members of Congress, were strong adherents of the Liberal and what might be called the anti-Clerical Party. Exiled with their father in the fifties, during the administration of Manuel Montt, they returned home to wield a fertile pen in strong newspaper polemics, one of them founding La Libertad and later on La Semana, at which they worked conjointly. The present work, forming the second volume of the series, has as its title *Los Constituyentes de 1870*. It has been edited, together with a critical sketch, by Don Roberto Huneeus. The work contains 109 sketches of members of the Congress of 1870, with numerous reflections of a political nature. The name of the writer, either Justo or Domingo Arteaga Alemparte, is affixed to each article. Among these sketches figure the names of some of the illustrious sons of Chile who have contributed to build up her history, literary and political, of whom the greater number have passed away. Thus we find the diplomatist Maximiano Errazuriz, the writer Miguel Luis Ammunategui, the journalist Zorobabel Rodriguez, the philanthropist Luis Cousiño, whose name is perpetuated by a Santiago Park, the historian Diego Barros Arana, the novelist Alberto Blest Gana, and the orator Abdon Cifuentes, with other lights of greater or less brilliancy.

These sketches, dealing with living actualities at the time they were written by active participants in the political combats of the day, are of especial interest to the political historian of Chile, exhibiting as they do the thoughts, sentiments, passions, and actuating motives that still act upon the present moment and generation.

The author promises us in another volume a collection of the poems, principal parliamentary discourses, and other works of the brothers Arteaga Alemparte.

Recuerdos del pasado (1814–1860) is the title of the third of the series, the author of which is Vincente Perez Rosalez. It is preceded by a biographical sketch from the pen of Luis Montt.

Rosalez, born at Santiago in 1807, gives us in his work which has passed through three editions an autobiographical sketch of nearly half a century. Many are the things which he has to relate, for his career had been varied and full of incidents in his native country, in North America, and in Europe. A very interesting chapter for those who are acquainted with the Santiago of to-day is his description of Santiago as the author knew it in his childhood. We pass with him through the exciting period of the revolution, we accompany him to Europe in his earlier life, where we gather odds and ends of reminiscences, the very mention of which in the index excites our curiosity, and we return to Chile, where we are soon caught in the vortex of revolution. Then, at the time when California has the "gold fever," we make an interesting journey with the writer from Valparaiso to San Francisco and return to South America to follow the trend of events that bring this book to a close.

Written without literary pretensions, yet with ease and fluency, and in conversational style, the "Recuerdos del Pasado," with its fund of useful information, is, according to Luis Montt, perhaps the most original work thus far produced by the Chilean press.

The fourth and fifth volumes of the series under consideration bear the title *Obras de Isidoro Errázuriz*, and contain parliamentary discourses of this distinguished man.

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[1] Charles Warren Currier, Ph. D.

The editor, Don Luis Orrego Luco, prefixes the work with a copious biographical sketch of Errázuriz, together with ample critical considerations.

The name Errázuriz is famous in the annals of independent Chile, among those who bore it being noteworthy Frederico, president of the Republic in 1871; Maximiano, known as a diplomatist in this country in the sixties, and the latter's brother, the Dominican Father, and historian, Crescente.

Isidoro's immediate family has been known for its liberal propensities. Born in 1835, Isidoro was brought up in this liberal atmosphere, and became one of the coryphei of the Liberal Party, though, before passing over to the University of Göttingen, he had been educated at the Jesuit College of Georgetown, together with Manuel Irarrazaval, a man of entirely different views, and a leading Conservative.

Throughout his life, Isidoro Errázuriz was prominent as journalist, and in his later years as a man of politics. Like most men of note in Spanish America, he had also the reputation of a poet.

As journalist, he edited for a brief period El Mercurio, but he will probably be best remembered as the founder of La Patria of Valparaiso.

His political career began in 1870, with his election to Congress, and from this period date his political discourses.

After a period of seclusion he returned to public life, some time before his death, more than a year ago.

The Parliamentary Discourses of Isidoro Errázuriz, in the two volumes before me cover a period of twenty years, terminating in 1890. They deal almost entirely with subjects completely national, if you except two or three relating to the war with Bolivia and Peru, which, naturally, possess an international value. Exception may also be made for those relating to relations between church and state, as they give a glimpse into the heart and soul, as it were, of the tendency for separation which, perhaps, characterizes most Latin countries.

Sentiments like those expressed by Errázuriz, must not of course be taken as an index of prevailing opinions in Chile; they represent only one side. The impartial historian or political economist must take them in connection with opinions expressed by the other side, and by men like Abdon Cifuentes, for instance. The works of the series, Biblioteca de Escritores Chilenos, which we have thus far received, represent writers of more or less anticonservative bias. In course of time the Government will probably also introduce works of the Conservatives and pro-Catholics.

SUBJECT MATTER OF CONSULAR REPORTS

REPORTS RECEIVED UP TO OCTOBER 1, 1911.

Title.	Date.	Author.
ARGENTINA.	1911.	
Municipal taxes, 1911	June 22	R. M. Bartleman, consul general, Buenos Aires.
Free entry of railway supplies	July 19	Do.
Possible food products of Argentina	July 20	Do.
Annals of the rural society	...do....	Do.
Wool shipments	July 22	Do.
Trade notes: Railway notes; general notes: population of Buenos Aires; contract with French Society of Public Works for construction of "rambla."	July 27	Do.
Boletín Mensual de Estadística Agricola	Aug. 2	Do.
Trade notes: Foreign commerce of Argentina	Aug. 7	Do.
Report of minister of public works	...do....	Do.
Economic and financial data. transmitting pamphlet of the ministry of finance.	Aug. 8	Do.
Report of Argentine ministry of finance for 1910	Aug. 10	Do.
Report with reference to rural property	Aug. 15	Do.
Comparative table showing the 20 largest customers of the United States during the fiscal years 1909-10 and 1910-11.	Aug. 16	Do.
Trade notes: Argentine Government given permission to open Pacific Ry.; population of the city of Buenos Aires; concession granted to French Ry. Co.; arrangement between Argentine post-office department and steamship agency in Valparaiso, Chile, by which mail for New Zealand and Australia will be sent overland; telephone lines; electric light and tramway company formed in Lujan; newspaper reports of company being formed to construct freezing plant.	Aug. 25	Do.
BRAZIL.		
Annual report of commerce and industries, calender year 1910	June 30	Jay White, consul, Santos.
News and trade papers in Rio de Janeiro	July 16	J. Lay, consul general, Rio de Janeiro.
Pernambuco notes: Automobiles; population; amount of sugar delivered; German South American cable; amount of cotton received in Pernambuco during 1908-9; new system of draining; contract for port works; construction of parks and avenues of the city.	July 17	P. M. Griffith, consul, Pernambuco.
Belting industry	...do....	J. Lay, consul general, Rio de Janeiro.
Sale of adding and calculating machines	July 20	Do.
Market for wire rope	July 25	Do.
Leather belting	July 27	Jay White, consul, Santos.
Imports and duty	Aug. 1	Do.
Wood alcohol	Aug. 29	P. M. Griffith, consul, Pernambuco.
CHILE.		
Port improvements at San Antonio	Aug. 7	A. A. Winslow, consul, Valparaiso.
Bids for railway automobiles	...do...	Do.
Expenditures of the Chilean Government	...do...	Do.
Government's interest in Chilean mining industry	Aug. 11	Do.
Earnings of nitrate companies	...do...	Do.
Use of cement in Chile	...do...	Do.
Bids for rolling stock	Aug. 14	Do.
Coal hulk at Punta Arenas	...do...	Do.
Chile trade and outlook	Aug. 15	Do.
Trade and industrial notes: Street-car lines of Santiago; banks of Chile: post offices; to increase raising of flax; money to complete sanitary works under construction; water power to generate electrical current.	...do...	Do.
Bids for school furniture	Aug. 23	Do.
Chilean railway notes	Aug. 28	Do.
Consumption of edible vegetable oils	...do...	Do.
COLOMBIA.		
Annual report on commerce and industries of Barranquilla and consular district.	Aug. 24	A. L. Burnell, consul, Barranquilla.
Report on use of wood alcohol in consular district of Barranquilla.	Sept. 20	Do.

Reports received up to October 1, 1911—Continued.

Title.	Date.	Author.
GUATEMALA.		
Corrugated roofing	Aug. 11	G. A. Bucklin, consul general, Guatemala City.
No commercial organizations	Aug. 12	Do.
Silverware and stamped steel ware	Aug. 16	Do.
Doors, sashes, windows, etc	Aug. 17	Do.
Opportunities for a towing or passenger motor boat	Aug. 18	Do.
Packing-house products	Aug. 22	Do.
Concession for freight transportation by wagon	Aug. 28	Do.
Vanilla beans	Sept. 1	Edward Reed, consul agent, Livingston.
Automobiles	...do....	Do.
Oiled or waxed papers	Sept. 9	G. A. Bucklin, consul general, Guatemala City.
Fly paper	Sept. 10	Do.
Autos, motor boats, and clubs	Sept. 12	Do.
Panama hats	Sept. 16	Do.
Concession covering electric lighting, power, and tramway in and surrounding Quezaltenango.	...do....	Do.
Contract for mail service at Pacific ports	...do....	Do.
HONDURAS.		
Marine engines	Aug. 18	A. T. Haeberle, consul, Tegucigalpa.
Waxed and oiled papers	Aug. 19	Do.
Metal building materials	...do.....	Do.
Market for American salt	Aug. 23	Claude I. Dawson, consul, Puerto Cortes.
Economic conditions in Honduras	...do.....	Do.
Coke and coal trade	Aug. 25	A. T. Haeberle, consul, Tegucigalpa.
Furniture	...do.....	Do.
Water communication between north coast points of Honduras	Aug. 28	Claude I. Dawson, consul, Puerto Cortes.
Boletin de la Secretaria de Fomento, Obras Publicas y Agricultura.	...do.....	A. T. Haeberle, consul, Tegucigalpa.
Credit terms to importers in foreign countries	Aug. 29	Claude I. Dawson, consul, Puerto Cortes.
Renewal of banana exports from the Ulua River, Honduras	Sept. 4	Do.
No automobiles used	Sept. 6	A. T. Haeberle, consul, Tegucigalpa.
No coal used	...do.....	
Market for American salt	Sept. 13	Do.
MEXICO.		
Importation of firearms no longer forbidden in northern Mexico	June 17	A. V. Dye, consul, Nogales.
Annual Commercial and Industrial Report 1910—part 1	Sept. 1	C. A. Miller, consul, Tampico.
Machinery, kinds in use	Sept. 6	C. B. Parker, vice and deputy consul, Mazatlan.
Sale of musical instruments	...do.....	L. T. Ellsworth, consul, Ciudad Porfirio Diaz.
Pipes, valves, cocks, etc	...do.....	A. V. Dye, consul, Nogales.
Moving pictures	Sept. 7	C. B. Parker, vice and deputy consul, Mazatlan.
Where to get bridge photos—docks and jetties	...do.....	I. H. Johnson, consul, Matamoros.
Industrial statistics	...do.....	M. Letcher, consul, Chihuahua.
Motor vehicles	Sept. 8	L. T. Ellsworth, consul, Ciudad Porfirio Diaz.
Lands for coconuts—possible sellers	...do.....	A. J. Lespinasse, consul, Frontera.
Notes on specimens forwarded in connection with report entitled "Industrial Statistics, State of Chihuahua, 1909."	Sept. 9	M. Letcher, consul, Chihuahua.
Market for machinery	...do.....	W. L. Bonney, consul, San Luis Potosi.
Pipe, valves, cocks, etc	...do.....	A. W. Brickwood, consul, Tapachula.
Condensed and evaporated milk	Sept. 11	A. V. Dye, consul, Nogales.
Market for machinery, etc	...do.....	C. M. Freeman, consul, Durango.
Pipe, valves, cocks, etc	Sept. 12	C. A. Miller, consul, Tampico.
New steamship line between New York and Mexico in Gulf ports	Sept. 14	Do.
Motor boats	...do.....	Do.
New flour mill	...do.....	Do.
Tampico notes: Machine shops, power plant at Nices Falls, S. L. P.; refinery improvements.	...do.....	Do.
Market for machinery	...do....	W. W. Canada, consul, Vera Cruz.
Artesian wells	Sept. 15	Warren W. Rich, vice and deputy consul in charge Salina Cruz.
Dealers in floor and wall tile, mosaic and marble	Sept. 15	Do.
Moving pictures	...do....	Do.

Reports received up to October 1, 1911—Continued.

Title.	Date.	Author.
MEXICO—continued.		
Watch trade and watch dealers	Sept. 15	Warren W. Rich, vice and deputy consul in charge, Salina Cruz.
Pianos	...do....	Do.
Vehicles, agricultural implements, and machinery	...do....	Do.
Moving pictures	Sept. 19	S. Magill, consul, Guadaljara.
Market for machinery	Sept. 20	F. Simpich, consul, Ensenada.
Gas engines	...do....	Do.
Sheet metal building material	Undated	Do.
Annual Commercial Report—Part II—Review of export trade (see Part I, dated Sept. 1, 1911).	Sept. 23	Clarence A. Miller, consul, Tampico.
Exemption of corn from duty	Sept. 26	Arnold Shanklin, consul general, Mexico.
NICARAGUA.		
Sale of musical instruments in foreign countries	July 15	A. J. Clare, consul, Bluefields.
Sale of adding and calculating machines	Aug. 14	Do.
Sale of sawmill and woodworking machinery	Aug. 15	Do.
Credit terms to importers in foreign countries	Aug. 19	Do.
Motor vehicles—reports in reply to circular instructions	Aug. 31	Do.
Market for American salt	Sept. 1	Do.
PARAGUAY.		
Value of circulating chambers of commerce publications	July 13	C. Ferris, consul, Asuncion.
Completion of all-rail route from Buenos Aires to Asuncion	July 18	Do.
Proprietary medicines	July 19	Do.
Baths and plumbing goods	July 20	Do.
News and trade papers	July 26	Do.
Hay	July 27	Do.
Another railroad route from Buenos Aires to Asuncion	Aug. 4	Do.
Sawmill and woodworking machinery in Paraguay	Aug. 10	Do.
PERU.		
Printed folder of the Peruvian Corporation (Ltd.)	July 18	W. H Robertson, consul general, Callao.
List of corrections in Annual Report of Commerce and Industries of Peru during the Calendar Year 1910.	Aug. 5	Do.
Copy of letter inclosing list of errata in annual report for 1910	Aug. 18	Do.
SALVADOR.		
Annual Report on the Commerce and Industries of Salvador for the Year ending December 31, 1910.	July 29	H. Clum, vice and deputy consul general, San Salvador.
Foreign trade opportunities	Aug. 1	Do.
Decimal fractional currency in Salvador	Aug. 2	Do.
Construction, decoration, and furnishing of the new National Theater, San Salvador.	Aug. 3	Do.
Customs concessions in favor of certain building materials	...do....	Do.
Increase in the import duties on matches	Aug. 28	Do.
URUGUAY.		
Uruguay customs revenue	July 18	F. W. Goding, consul, Montevideo.
Foreign commerce of Uruguay	July 26	Do.
Law revising customs tariff	July 29	Do.
Uruguay mercantile marine	July 31	Do.
Contract for building the American packing house in Montevideo.	...do....	Do.
Amount of railway guaranties, for the second quarter of the year 1911, paid.	Aug. 2	Do.
Special amortization of the consolidated debt	...do....	Do.
Reform of the charter of the bank of the Republic	...do....	Do.
Exports of wool from Uruguay to over-sea ports	Aug. 5	Do.
VENEZUELA.		
Proposed cotton mill in Maracaibo	Aug. 3	R. Totten, consul, Maracaibo.
Market for American salt	Aug. 19	Do.
Various contracts for municipal improvements in Ciudad Bolivar.	Aug. 22	J. A. Manning, consul, La Guaira.
Sale of musical instruments in foreign countries	Aug. 24	R. Totten, consul, Maracaibo.
Motor vehicles	Aug. 29	Do.
Market for American salt	...do....	I. A. Manning, consul, La Guaira.
Venezuelan budget for fiscal year 1911-12	...do....	Do.
Founding of new school of arts and crafts in Maracaibo	Sept. 1	R. Totten consul, Maracaibo.
Credit terms to importers in foreign countries	Sept. 2	I. A. Manning, consul, La Guaira.
Do	Sept. 4	R. Totten, consul. Maracaibo.
Tariff charge in Venezuela	Sept. 7	I. A. Manning, consul, La Guaira.

ARGENTINE REPUBLIC

ELECTION LAW.

The Boletin Oficial of July 28, 1911, contains the text of a new election law, providing for the appointment of election judges, the preparation of election lists, and the registration of voters, as promulgated by the President. The object of the law is to simplify the elections and to eliminate opportunities for fraudulent registration and voting.

PATENT AND COPYRIGHT CONVENTIONS.

The President of Argentina, in a special message to the Federal Congress, urges the ratification of the conventions adopted by the Fourth Pan American Conference at Buenos Aires in 1910 on the subjects of literary and artistic copyrights, inventions, patents, designs, and industrial models.

ARGENTINE TRADE-MARK LAW.

Through the courtesy of Richard M. Bartleman, Esq., the United States consul general at Buenos Aires, the Pan American Union is in receipt of an enlightening statement on the trade-mark law of Argentina submitted by Ralph W. Huntington, Esq., a citizen of the United States residing at Buenos Aires. Mr. Huntington has had a great deal of experience with the registering of trade marks and speaks with a degree of authority.

POSTAL CONVENTION AND AGREEMENTS.

In a special message to the National Congress the President of the Republic recommends the adoption of the principal convention and agreements concerning parcels post and postal money orders of the First Continental South American Postal Congress held at Montevideo, January 8 to February 2, 1911.

PROPOSED MUNICIPAL LOAN.

The municipality of Buenos Aires is considering the advisability of contracting a loan of 200,000,000 pesos paper, at 4½ per cent interest and 1 per cent amortization for the conversion of the outstanding debt of the city, the surplus to be used for street and other public improvements.

EXPANSION OF ARGENTINE TRADE.

A practical and comprehensive series of conferences to promote the commercial intercourse between the Argentine Republic and the United States has been arranged by Mr. J. P. Santamarina, the eminent Argentine engineer and expert on trade with South America. It is planned to hold these conferences in the leading cities of the United States, and to have each meeting devoted to several addresses by prominent trade experts, to be followed by an open session for queries and answers. The first meeting was held in New York City, October 10, 1911, at the Auditorium of the Y. M. C. A., on West Twenty-third Street.

PAN AMERICAN CONGRESS OF SHARPSHOOTERS.

Elaborate preparations are now under way for an international congress of sharpshooters representing North and South American countries, to be held in conjunction with the great shooting tournament at Buenos Aires, during the month of May, 1912. The meet will be held under the direction of the Tiro Federal Argentino (Argentine Federal Sharpshooters) and an invitation has already been issued to the National Rifle Association at Washington, D. C. The formal invitation is signed by Antonio del Pino and B. del Castillo Quesada, president and secretary, respectively, of the association.

FOREIGN COMMERCE FIRST SIX MONTHS, 1911.

A report from Consul General R. M. Bartleman, at Buenos Aires, furnishes the following data on the commerce of the Argentine Republic for the six months ended June 30, 1911, reduced to United States gold:

Exports, $190,623,522, which amount exceeds the value of those for the first six months of 1910 by $3,164,166; imports, $172,602,402, or an increase over the same period of last year of $7,606,064.

POPULATION OF BUENOS AIRES.

According to municipal statistics recently collected by the municipal government of the Federal capital, the population of Buenos Aires on July 31, 1911, was 1,331,404.

IMMIGRATION FIRST SIX MONTHS OF 1911.

During the first six months of 1911 immigrants to the number of 101,487 entered the Argentine Republic. In the same period 83,111 left the country, so that the net gain was 18,376. The principal nationalities were as follows: Spaniards, 41,312; Italians, 39,390; Syrians, 5,213; Russians, 4,950; Austrians, 2,016; French, 1,997; Germans, 1,373; Portuguese, 982; Englishmen, 656, and North Americans, 116. Among the number were 20,376 agriculturists and 28,426 laborers.

DEMAND FOR AGRICULTURAL MACHINERY.

The number of thrashers imported into the Argentine Republic in 1910 was 807, varying in value from 10,000 to 15,000 Argentine pesos each. The crop of cereals in 1911, and especially the production of wheat, has been so great throughout the entire Republic that in anticipation of the harvest the machinery-importing houses of the principal cities have placed orders in the United States and Europe within a period of two months for not less than 1,200 thrashers. Most of these machines had already been sold to dealers and farmers in the interior of the Republic. In addition to the large number of thrashers that will be sold during the present year in Argentina, it is estimated that the number of plows imported will be about 125,000, those of reapers 25,000, and drills 35,000.

STORAGE OF MERCHANDISE TO SOUTHERN PORTS.

The treasury department of the Argentine Government, acting in conjunction with the Department of Agriculture, has arranged with the customs authorities at Buenos Aires to handle and store merchandise consigned to the southern Atlantic ports of the Republic. This has been done in order to facilitate and develop the growing trade of these ports with Buenos Aires and with foreign ports shipping to southern Argentina via the River Plata. This arrangement will also obviate the necessity of transshipment and storage in the free port of Punta Arenas, Chile, of consignments en route to South Atlantic Argentine ports.

MISCELLANEOUS CONSULAR NOTES.

The first woman admitted to practice law in Argentina was recently sworn in as a barrister in the civil court of Buenos Aires.

A citizen of the United States recently purchased one of the most complete collections of Argentine stamps, paying over $29,000 for it.

RAILWAY NOTES.

The Cordoba Central Railway has extended its passenger service to Buenos Aires, thereby placing the capital of the Republic in direct rail communication with Tucuman, via Rosario. The passenger coaches of this road were made in the United States.

D. Selva & Co. have petitioned Congress for a concession to build a branch railway from kilometer 40 on the San Lorenzo Railway to Villa Casilda, and also a branch line from kilometer 350 to General Villegas. This company also proposes to build branch lines to San Rafael and Molague, and a line to the north, running parallel to the Mendoza River.

The French Railway Co. of Santa Fe has requested a concession for the extension of its lines to the confluence of the Pilcomayo and Paraguay Rivers, and for the construction of a port at Bermejo as well as one at the terminus of the railway.

BOLIVIA

MESSAGE OF THE PRESIDENT.

On August 6, 1911, President Elidoro Villazón delivered an interesting message to the Bolivian Congress, in which he outlined in great detail the political, industrial, and commercial activities of the country for the 12 months past. From the facts and figures contained in this message it is apparent that the nation enjoyed a year of positive and favorable development and progress.

In speaking of the internal and international relations of Bolivia with the rest of the world the following statements are of particular interest:

The year in review was characterized by tranquil internal conditions at home and amicable and peaceable foreign relations abroad.

The diplomatic relations with the Argentine Republic, which for a short time had been temporarily interrupted, were resumed, and the traditional cordiality existing between the two nations was strengthened.

The boundary demarcation between Bolivia and Brazil is in process of settlement. On November 14, 1910, a protocol was signed between Brazil and Bolivia, modifying article 7 of the treaty, in which Brazil agrees to construct a railway from Villa Murtinho to Villa Bella. This branch railway is to leave the Madeira Mamore Railway at Palo Grande Falls, and passing over a bridge constructed at the latter place will continue to Esperanza Falls, on the Beni River. Bolivia is to acquire the part of this railway within her territory at such time as she may deem convenient. The Madeira Mamore Railway is being actively pushed forward. The rails are laid to Villa Murtinho, opposite Villa Bella, and traffic was opened in September, 1911, to kilometer 220, near the mouth of Abuna River, and the whole line will undoubtedly be finished by the close of 1912.

A treaty of commerce has been approved by the legislatures of Brazil and Bolivia, and ratifications have been exchanged.

The protocol between Bolivia and Chile has been approved by the Congresses of both countries, and the exchange of ratifications will probably take place in a short while. This treaty provides for the settlement of the pending nitrate and borate questions existing between the two countries.

The President makes reference to the relations of Bolivia with the United States in the following words:

"It is especially gratifying to us to mention the many tokens of regard and esteem which the great Republic of the United States has shown us. We think that its international policy has always been in favor of the peace and harmony of the American States and of the practice of democratic institutions.

"In acknowledgment of this policy we have entered into a general treaty of arbitration, which the Congress of the United States has already approved. As this treaty has been submitted to the legislature it becomes your duty to sanction it."

The boundary in dispute between Bolivia and Peru is being surveyed by an appointed commission in accordance with the terms of the protocol of instructions of April 15, 1911, and if no complications arise the work of the commission should be terminated within a period of two years.

TELEGRAPHS AND RAILWAYS.

The message then enumerates the various developments and increases in the telegraph system and continues with an elaborate statement of the railroad situation in Bolivia. New roads projected at various points throughout the country and the constant efforts of the Government to continually open up new tracts of land and properly develop them bespeak the progress of the nation. The figures given herewith are extracted from the message, and indicate the extent to which the telegraph and railroad systems were developed during the year:

The telegraph business of the country increased notably during the past year, the receipts having been 33,013 bolivianos more than those estimated in the budget. The number of telegrams sent during the year was 180,554, and the number of those received 360,053.

Contracts have been made for the construction of a double wire telegraph line from Uyuni to Tupiza, the completion of which is expected during the fall of the present year. Provision has also been made for the construction of a telegraph line from La Paz to the mineral districts of Araca, Quillacollo, and Ayopaya, and the repair of a number of important lines in other parts of the Republic.

The Bolivian Railway Co. has continued improvements on its main line, and is hurrying forward the construction of its branches. The railway between Rio Mulatos and Potosi has been opened to traffic for a distance of 80 kilometers. The remaining 93 kilometers will probably be completed by February, 1912.

The Cochabamba Railway is in operation up to kilometer 62, and active work is being done on the 23 kilometers between the end of the line and Ventilla, and the work of construction is being rapidly pushed forward to Cochabamba.

The Uyuni to Tupiza Railway is being constructed over a distance of 88 kilometers.

The Antofagasta Railway Co. has proposed to construct, without aid from the State, a railway from Viacha to La Paz, which, after the Oruro Railway is extended, will be the second steam railway entering La Paz.

The La Quiaca to Tupiza Railway will soon be carried forward to a successful termination by the Bolivian Railway Co.

The Viacha & Arica Railway, the rails of which have been laid for a distance of 175 kilometers on the Chilean section and 125 kilometers on the Bolivian section, will, according to the estimates of the contractors, be opened to public traffic in June, 1912.

The first section of 18 kilometers of the Cochabamba Electric Railway to Vinto has been opened to traffic, and that part of the line which will communicate with the Cliza Valley is in course of construction. This company has erected machine shops, a station, and a power house in Cochabamba.

A Government engineer has been sent to report upon the practicability of a railway between La Quiaca and Tarija, and a similar report will be made on a road from Potosi to La Paz and upon the line being constructed from Rio Mulatos.

Within the last five years 368 kilometers of railway have been opened to public traffic in Bolivia, and there are now under construction or have definitely been decided upon 1,138 kilometers more, so that, adding the lines previously constructed, the railway system of Bolivia, including completed and projected lines, aggregates 2,121 kilometers.

Other public improvements, such as the opening of highways, have been carried out by the Bolivian Government during the past year, and the Cajamarca waterworks, costing 2,000,000 bolivianos, will soon be completed.

FOREIGN COMMERCE FOR 1910.

Referring to the commercial phase of the country's progress, the message states that the total foreign commerce of Bolivia for 1910 represents the largest amount ever enjoyed by that country, and gives the total amount as 124,424,541 bolivianos, an increase of 26,435,310 bolivianos over the year 1909. Elaborating on these figures the message continues:

The imports for 1909 were 48,802,394 bolivianos, of which 21,872,156 bolivianos represented merchandise subject to duty and 26,930,238 bolivianos merchandise free of duty, nearly all of which consisted of machinery, utensils for use in the industries, and material for railway construction. The exports in 1910 amounted to 75,622,146 bolivianos and consisted of the following articles:

	Kilos.	Value in bolivianos.		Kilos.	Value in bolivianos.
Rubber	3,117,650	27,653,555	Bismuth	311,060	1,923,417
Tin	38,548,441	37,006,504	Sundry nondutiable products	13,696,734	1,775,320
Copper	3,211,987	1,786,952			
Silver ores	142,977	5,476,398	Total	59,028,849	75,622,146

The revenues for 1910 amounted to 14,901,722 bolivianos, made up of Federal receipts 14,901,722 and departmental receipts 2,157,423. This is an increase of 897,069 bolivianos in 1910 over 1909. The revenues for 1912 are calculated at 15,700,000 bolivianos.

The mining industry of the Republic continues prosperous, many mines having installed modern machinery for the exploitation of silver, tin, copper, and bismuth ores. New veins of tin have been discovered in the Departments of La Paz and Potosi, and the gold mines of Amaya Pampa, Umabamba, Chuquiaguillo, and Incahuara are being worked with great prospects for a large output of this metal.

The Government has encouraged the diffusion of education by maintaining different grades of instruction in the public schools, the employment of capable teachers, and the establishment of new elementary schools in the different provinces. A number of special schools are maintained, such as the normal school, the commercial school, the school of mines, and the veterinary and agronomic institute.

In closing his message President Villazon outlines as the policy of the Government the construction of railroads, the promotion of education, and the development of the mining industry in the Republic.

EXPORTS FROM NEW YORK TO BOLIVIA, SEPTEMBER, 1911.

Through the courtesy of the Bolivian legation at Washington the Bulletin is enabled to publish the following table showing the exports from New York to Bolivia for the month of September, 1911.

Cotton	$19,044.92
Machinery	15,693.70
Foodstuffs and beverages	11,786.60
Hardware	4,907.22
Kerosene	1,504.00
Miscellaneous	51,067.81
Total	104,004.25

BRAZIL

EXCHANGE OF RATIFICATIONS OF TREATY OF COMMERCE AND NAVIGATION WITH BOLIVIA.

The ratifications of the treaty of commerce and river navigation, concluded at Petropolis on August 12, 1910, between the Governments of Brazil and Bolivia, were exchanged at La Paz on July 20, 1911.

BUDGET FOR 1912.

The budget bill for the fiscal year 1912, as presented to the National Congress, estimates receipts at 91,790,776 milreis gold and 318,350,000 milreis paper, and fixes expenditures at 56,868,562 milreis gold and 382,924,976 milreis paper.

FOREST RESERVE IN ACRE TERRITORY.

A presidential decree of July 26, 1911, authorizes certain areas in the Acre Territory to be set aside as national forests. The reserve comprises four different tracts. The cutting of timber or extraction of forest products of any kind whatsoever, as well as hunting or fishing in the streams comprised in these forest areas is strictly forbidden.

GOLD MEDAL FOR THE PRESIDENT.

The President of the Republic and Dr. J. J. Seabra have received gold medals sent from Bahia in honor of their excellencies' recent visit to the northern port. The presentation was made by delegates from the Associaçào Commercial of Bahia in the Monroe Palace.

NEW MILITARY PORT.

The President of the Republic has signed a decree soliciting the authorization of Congress to the construction of a military port.

NEW INDUSTRIES IN BRAZIL.

The Brazil Land, Cattle & Packing Co. to engage in the export and import of cattle.

The Hillebrand Brazil Coal Co., with headquarters in New York City.

The United States Steel Products Co., with headquarters at Hoboken, N. J.

The Brazilian Colonization & Development Co., with headquarters at St. Louis, Mo.

The North British & Mercantile Insurance Co., with headquarters at London and Edinburgh.

The Deutsche Uberseeische Bank of Berlin, have been authorized by the Government of Brazil to establish branches at Rio de Janeiro, Sao Paulo, and Santos.

GOVERNMENT AID FOR RAILROADS.

A project has been presented to Congress suggesting that the Government should give a grant of 15,000 milreis (about $4,500) per kilometer to aid the construction of lines built by the States or by their concessionaires. It is proposed that half the grant shall be made when the work is commenced, and the other half in installments as each section is opened to traffic. The grant is to be repaid to the Federal Government after the net revenue of the lines reaches 7 per cent for three consecutive years.

RAILROAD EXTENSION.

The Paulista Railway Co. proposes to construct a double line from Jundiahy to Campinas, to be afterwards extended as far as Rio Claro, in order to facilitate the traffic of this company, which has considerably increased.

CHILE

MINING CLAIMS.

An executive decree of August 7, 1911, outlines the procedure required in the payment of mining licenses, the auction of mining claims, and the listing of the mines of the Republic. The mines specially referred to in this law are nitrate deposits.

Requests for mining claims must contain the name of the applicant, also of any party or parties interested with him, the name of one of the three claims to which the applicant may be entitled; the name of the political division and mining district in which the claim is situated, and the kind of mineral and the area in hectares comprised in the claim. Mining claims must be auctioned in accordance with the provisions of the mining code and of the code of civil procedure. The minimum offer in auction sales shall not be less than the value of the unpaid licenses and the costs in connection therewith, and the price must be paid within three days from the time of acceptance, and the registration within ten days.

Provision is made for the preparation of a list of all the mines of the Republic by the National Mining Society, information to be furnished to that society, quarterly, by those in charge of mines. The full text of the decree is published in the Revista Comercial of August 19, 1911.

BANK OF PUNTA ARENAS.

The Bank of Punta Arenas has been authorized by the treasury department of the Federal Government to increase its capital from 1,000,000 pesos to 2,000,000 pesos by the issuance of 10,000 shares of the value of 100 pesos each.

PROPOSED IMPROVEMENTS AT VINA DEL MAR.

The municipality of Vina del Mar, a suburb of Valparaiso, Chile, has requested the Federal Government to authorize the negotiation of a loan of 2,000,000 pesos for municipal improvements, the most important of which are as follows:

	Pesos.
Slaughterhouse	150, 000
Garbage-incinerating plant	100, 000
Municipal theater	275, 000
Public baths	75, 000
Police quarters	70, 000
Villanelo bridge (part)	30, 000
Street pavements	1, 000, 000

The municipality proposes to issue two series of 8 per cent bonds, with 2 per cent amortization, face value 100 and 1,000 pesos each.

ELECTRIC INSTALLATION AT BULNES.

The department of the interior of the Government of Chile has approved the project for the installation of an electric light and power plant at Bulnes.

WATER SUPPLY FOR TOCOPILLA.

The project for supplying the city of Tocopilla with potable water and the construction of a proper sewerage system has been approved by the Federal board of public works. This sanitary improvement will be effected at an estimated cost of $785,000.

MINING CHART OF THE REPUBLIC.

A commission appointed by the Chilean Government is now at work on a mining map of the Republic. This chart is intended to serve as an official guide to the mineral zones of the country, and should be of great value to prospectors and miners as well as an aid in extending the railroads through the most productive regions.

CONSULAR NOTES.

An effort is being made by the Chilean Government to increase and encourage the raising of flax in the country.

The President of Chile recently recommended to Congress the establishment of a geographical institute with a corps of mining engineers to assist in the development of the rich mining resources of the nation.

The Chilean Government has been prospecting extensively for an underground water supply for 300 miles north of Valparaiso, with very satisfactory results.

OPERATIONS OF PUBLIC-SERVICE CORPORATIONS.

The electric tramways of Santiago operated, during 1910, an average of 200 passenger coaches daily over their 111.8 kilometers of tracks and carried 83,148,755 persons. The net profits of this company, which also supplies light, amounted to over $880,000 and allowed a dividend of 6 per cent on the preferred stock.

The electric tramway of Valparaiso carried over 33,290,000 passengers during 1910, operated a daily average of 69 cars, and earned a net profit of approximately $425,000, enabling the payment of a 6 per cent dividend.

RAILWAY TARIFF REDUCTION.

To meet the deficit in the operation of the State railways of the Republic of Chile during the past year, the freight, passenger, and baggage tariffs of these railways were raised by a departmental decree of February 9, 1911, the new tariffs becoming operative on August 12 of the present year. It was found, however, that this increase would produce a revenue considerably in excess of the actual deficit sustained or any probable deficit that might occur. The department of industry has, therefore, modified the increased tariffs by reducing the freight rates on merchandise 30 per cent, the passenger and baggage rates and the tariff on live stock remaining the same.

RAILWAY NOTES.

The board of public works has recently approved a number of projects for railway construction, the principal ones of which are as follows:

The Cabildo to Petorca section of the Artificio to Chincolco Railway, a distance of about 30.5 kilometers. The gauge of this road is 1 meter.

The Freire to Cunco Railway, having a gauge of 0.68 meters and a length of about 60 kilometers.

The Melocoton to Volcan section of the San Bernardo to Volcan Railway, for the lump sums of 1,311,600 pesos paper and 146,503 pesos gold (peso gold = $0.365; paper, average value $0.21).

The Palomas to Juntas Railway at an estimated cost of 739,591 pesos paper and 167,343 pesos gold.

The survey of the Northern Longitudinal Railway, from kilometer 300 to kilometer 340.4, has been approved by the Chilean Government.

Railway communication was established in September last between Antofagasta and Tocopilla.

COLOMBIA

MESSAGE OF PRESIDENT RESTREPO.

The annual message of the President of Colombia was presented to the National Congress at its opening session on July 20, 1911, a résumé of which is given below.

President Restrepo commences with the statement that after the first year of his incumbency he feels that he has endeavored to fulfill his oath of office by faithfully observing the constitution and laws of the country and by serving the interests of his fellow citizens to the best of his ability. He rejoices at the fact that the present Congress is the most authentic representation of the Colombian people, it being composed of members freely elected by all the citizens qualified as voters.

Public order and peace throughout the Republic, the message states, was not disturbed in the least, despite the fact that eight different elections were held almost simultaneously. Convinced that the basis of peace and good government lies in the free exercise of the right of suffrage, the President spared no effort in enforcing the suffrage provisions.

With reference to the post and telegraph service, it is reported that it has a personnel of 1,998 employees distributed among 608 offices, and that its maintenance cost is about $45,000 gold per month. A statistical division recently created in the bureau of posts and telegraphs is now engaged in taking a complete census of the service. A saving amounting to $116,103.48 gold, as well as an improved service, was effected through new contracts for the transportation of mails. For instance, the mail from Bogota to Bucaramanga formerly required 12 days, whereas now it is delivered within 7 days; from Bogota to Cucuta the time has been reduced from 15 to 9 days; from Bogota to Medellin, by way of Manizales, formerly 15 days, now 10 days. The total of economies effected during two years in the postal and telegraph service is given by the message as $328,899.90 gold.

Report is made upon the splendid work performed by the commission of advisory lawyers, recently created by the National Assembly; among the services rendered to the Government it has drafted several important codes which will soon be submitted for the consideration and approval of Congress.

Under the heading of "Foreign affairs" the President states that the relations with the countries of the world have continued as friendly and cordial as ever, and that the Government is endeavoring to bring about an amicable settlement of the questions it has pending with some nations. The relations with Venezuela were further strengthened, especially through the active participation of Colombia in that country's centennial celebration. Colombia was also represented at the centenaries of Argentina, Chile, and Mexico, at the Pan American Conference of Buenos Aires, and other international congresses.

The chapters relating to finance, commerce, and railroads have been fully discussed in the annual review of Colombia, published in the August, 1911, issue of the BULLETIN.

Public instruction is, according to the message, divided into five sections: Primary, secondary, professional, artistic, and industrial. Special attention was given by the Government to primary instruction, it being, as the President remarks, the basis of educational progress. Professional instruction in natural science, medicine, law, political science, mathematics, engineering, and dentistry is given at the National University of Bogota, the National School of Mines in Medellin, at the Colegio Mayor de Nuestra Señora del Rosario, and at the departmental universities of Antioquia, Cartagena, Cauca, and Narino. Artistic, industrial, and commercial instruction is imparted through the National Conservatory of Music, the Beethoven Academy of Cartagena, the National School of Fine Arts of Bogota, the Central School of Arts and Crafts of Bogota, the School of Wearing of la Presentacion, the National School of Commerce at Bogota, the various manual-training schools established in the capitals of the Departments. The message, according to figures carefully compiled by the department of public instruction, gives the total number of students in the Republic in 1910 as 239,987, attending 3,877 educational institutions.

NEW CONSUL GENERAL AT NEW YORK.

The President of Colombia has appointed Sr. Francisco Escobar consul general of the Republic at New York and Sr. Rafael del Castillo vice consul.

NEW INTENDENCY CREATED.

The President of the Republic of Colombia has issued a decree creating a new intendency in the Department of Magdalena. It is the National Intendency of La Goagira, and has for its capital the city of Guaraguana. The government of La Goagira is entrusted to an administrator and a special commissioner, both appointed by the minister of the interior.

GENERAL CENSUS OF THE REPUBLIC.

A recent executive decree provides for the taking of a general census in the Republic of Colombia. For this purpose there has been created in Bogota a central board of the national census, and departmental boards in the capitals of the Departments. The director general of statistics is a member of the central board.

EXCHANGE OF COLOMBIAN AND ECUADORIAN CADETS.

By virtue of a convention signed in the city of Quito between the Colombian minister at that capital and the minister of foreign affairs of Ecuador, the Government of Colombia has agreed to send four cadets to the military academy at Quito, and, reciprocally, the Government of Ecuador will send the same number to the military academy at Bogota. The expenses of the cadets will be borne by the Government where the studies are pursued.

LIGHTHOUSE IN CERRO DEL MORO.

The department of public works of the Republic of Colombia has entered into a contract with Sr. José A. Barros for the construction of a lighthouse in Cerro del Moro, on the Bay of Santa Marta.

RAILROAD NOTES.

Another section of the Amaga Railroad was opened to public traffic on July 20 last. This new section is comprised between Envìgado and Sabaneta.

The National Government of Colombia has recently paid to the Antioquia Railroad Co. the sum of $40,000 gold as subsidy for the 4 kilometers of railroad recently opened to public traffic.

There have arrived at Buanaventura, for the Cauca Railroad, 902 tons of materials, as follows: Two locomotives, 4,000 barrels of cement, and miscellaneous articles.

COSTA RICA

THE NEW COSTA RICAN LOAN.

It is announced in the London press that the Costa Rican loan for 35,000,000 francs ($6,755,000) is placed at 5 per cent with Paris, Hamburg, and New York bankers. It is stated that the loan is for the repayment of the $1,200,000 bonds of the Pacific Railway and the internal debt of the Republic.

CUSTOMS REVENUES, FIRST SIX MONTHS 1911.

The total receipts of the Costa Rican Government for customs duties for the first six months of the current year totaled 3,228,165.96 colones, representing an increase of 681,713.02 colones over the customs revenues for the similar period of 1910. (The colon has a value of $0.465 United States gold.)

NEW BRIDGE.

The new bridge which has been built over the River Las Ciruelas to replace the structure destroyed two years ago was recently opened to public traffic.

CUBA

THE CUBA FRUIT EXCHANGE.

From Deputy Consul General Henry P. Starrett at Habana comes an interesting report stating that the American growers of citrus fruits and vegetables in Cuba have organized the Cuba Fruit Exchange, consisting of three departments: The agricultural supply department, the commission department, and the forwarding or shipping department. The purpose of the supply department is to furnish machinery, tools, implements, fertilizers, crates, paper, nails, and feed to the grower at the lowest market prices, for which services a small commission will be charged. The commission department has been instituted to stimulate the sale of island-grown products in the local Habana market. Heretofore it has been almost impossible to secure high-grade fruits and vegetables in the market, due to the lack of an aggressive organization to handle the matter properly. This department has already demonstrated the success of the idea.

The last and most important department is that of the forwarding and shipping of fruits and vegetables to the United States and other foreign countries. The exchange is giving growers explicit instructions as to proper methods of grading, packing, and handling fruits and vegetables; it will attend to the forwarding and shipping of the same to foreign countries, and through its connections in these countries will make a careful study of market conditions and guide their shipments accordingly. The usual exchange commission will be charged for this service.

INVESTMENTS IN CUBA.

A conservative estimate, based upon the latest and best information obtainable, places the amount of capital invested by citizens of the United States in Cuba at $220,000,000.

GROWTH OF SUGAR INDUSTRY.

There appears to be a steady growth in the production of the sugar industry in Cuba. New lands are constantly being cleared and planted and experiments in irrigation are being conducted successfully in the Guantanamo district, promising to give greatly increased yields. The United States Sugar Co.'s plant for defibering the sugar cane seems to be a success. The inventor of the process claims that the greater recovery of sugar increases the return on each ton of cane by $2, and that there is an additional $3 to $4 gain on every ton in value of the cellulose.

FRUIT EXPORTS.

The production of fruits and vegetables in Cuba has tripled in the last three years. The value of the bananas exported from Cuba to the United States in 1910 was $641,382, a gain of $106,716 over that of the year previous.

STARCH FACTORY.

There has recently been built at San Luis, Cuba, a factory for making starch from the tubers of the yucca, a plant that thrives in Cuba. The industry gives promise of proving highly successful.

CONSULAR NOTES.

The Cuba Railroad Co. has established an industrial department at its headquarters in Camaguey, with an agricultural experiment field. An expert is in charge and he is studying the possibilities of new crops.

The company has also established an express service over its lines and has arranged for wagon delivery of packages in the larger cities.

DOMINICAN REPUBLIC

WHARFAGE TAX.

From the United States minister at Santo Domingo, Hon. William W. Russell, comes a copy of the translation of the law of June 26, 1911, fixing the wharfage tax on imported merchandise. One of the good features of the new law is that it does not retain the provision of the former law that all goods shipped must pay the tax whether they pass over the wharf or not. The present tax is only for the use of the wharf.

NEW HIGHWAY.

Work has been started on the highway that will connect the Provinces of La Vega and Moca, Dominican Republic, the construction being carried on at both ends of the road simultaneously.

ECUADOR

MESSAGE OF THE PRESIDENT.

The message of the President of the Republic, delivered to the National Congress on August 10, 1911, states that the revenues of Ecuador for 1910 amounted to 15,117,203.99 sucres, made up of the following items: Customs receipts, 10,799,197.78 sucres; fiscal revenues, 3,610,166.45 sucres, and revenues for national defense, 707,839.76 sucres. The expenses for the same period were 15,479,433.72 sucres, causing a deficit of 362,229.73 sucres.

In January of the present year a loan of 3,000,000 sucres, at 15 per cent discount and 6 per cent interest, was negotiated with Speyer & Co., this loan netting the Government 2,555,000 sucres.

The message says that public instruction has received the especial attention of the Government during the past year. There are in the Republic 1,197 public primary schools, with an enrollment of 92,947 pupils; 152 municipal primary schools; and 302 private primary schools. The Federal Government subventions the following intermediate schools and institutions of higher education:

Intermediate schools.

	Sucres.
Ibarra—Teodoro Gomez de la Torre	9,476.00
Quito—Mejia	54,501.00
Latacunga—Vicente Leon	3,500.00
Ambato—Bolivar	10,000.00
Riobamba—Maldonado	13,780.00
Guaranda—Pedro Carbo	9,950.00
Cuenca—Benigno Malo	22,800.00
Loja—Bernardo Valdivieso	6,819.00
Machala—Nueve de Octubre	18,300.00
Guayaquil—Rocafuerte	98,986.00
Portoviejo—Olmedo	16,035.28
Total	264,247.28

Higher institutions of learning.

Central University	108,890.00
University of Guayas	84,719.84
University of Axuay	44,095.00
Faculty of Loja	5,760.00
Total	243,464.84

An executive decree issued in 1906 provided for a potable water supply for Quito, and the board in charge of the matter has decided to inaugurate the waterworks of the Federal capital on the anniversary of the nation's independence.

The providing of the Federal capital with a tramway service was intrusted to the municipality of Quito, and the work of construction by the contractors is now in progress.

The town of Puembo has been furnished with potable water, and the highway to Coyambe, which provides easy communication between the Provinces of Pichincha and Imbabura, is nearing completion.

Funds have been obtained for the extension of a cart road into the eastern section of the Republic, and arrangements have been made for the installation of waterworks at Riobamba. A park has been dedicated in the capital of the Province of Chimborazo in honor of the scholarly Maldonado, and waterworks for the furnishing of Santa Elena with a potable water supply are being constructed.

The municipality of Yaguachi has contracted for the construction of a branch railway from kilometer 12 of the Guayaquil to Quito Railway, which branch will pass through that town and connect with the railway which runs to Bucay.

The railway at El Oro has been repaired, the guage widened, and new rolling stock supplied.

A park has been opened in Montecristi in the Province of Manabi, the customhouse at Manta has been completed, and the Bahia de Caraquez Railway has been opened to public service between Bahia and Calceta.

On June 30 of the present year the railway construction from Manta to Santa Ana was begun, and the contractors have promised that the line to Montecristi will be opened for public traffic in November next.

The Mercantile College building at Rocafuerte is nearing completion, and the message states that bonds for the deepening of the port of Bahia are soon to be issued.

Bids have been requested for the construction of a railway from Esmeraldas to Coquitos.

NEW GOVERNMENT PUBLICATION.

An excutive decree of July 19, 1911, provides for the establishment and publication by the Department of Fomento of a monthly bulletin or review, known officially as Boletin de Fomento. This publication is intended to promote the development of the national industries and especially of agriculture. The bulletin will be distributed gratis in the Republic of Ecuador, and will be sent abroad in exchange for other publications.

APPROPRIATION OF LANDS FOR ECUADOREAN TOWNS.

The Congress of Ecuador has passed a law providing for the appropriation by the State of the unoccupied lands of the religious orders wherever needed for use in the beautification or industrial development of the cities and towns of the Republic. Such lands will be sold at auction and the proceeds invested in other property or lands which will be given to the orders in lieu of the lands appropriated by the Federal Government.

PUBLIC BUILDINGS OF QUITO.

Recent statistics show that there are 123 public buildings in the city of Quito, the most prominent among which are the national palace, the tribunals of justice, the municipal palace, the exposition building, the archbishop's palace, the school of fine arts, the astronomic observatory, the panopticon, the conservatory of music, and the school of arts and crafts.

MONUMENT TO COLUMBUS IN BARRANQUILLA.

On July 20 last, the anniversary of Colombia's independence, there was unveiled at Barranquilla a magnificent marble monument to Christopher Columbus, presented by the Italian colony in that city.

NEW TELEGRAPH LINE TO CUENCA.

The telegraph line between Cuenca and Guayaquil, via Naranjal, has recently been inaugurated. This new line communicates with the Province of Azuay and will be of great convenience and use to the commercial and other interests of that important Province of the Republic.

GUATEMALA

CENTRAL AMERICAN INTERNATIONAL BUREAU.

The Bulletin is in receipt of information indicating that in accordance with the Washington convention, which created the Central American International Bureau, and in compliance with the rules and regulations of that institution, the Hon. Arturo Elizondo, delegate from Nicaragua, took possession of the office of president on September 15, and that the duties of treasurer are now performed by the Hon. D. José Pinto, delegate from Guatemala.

CONCESSION FOR OIL REFINING.

The National Assembly of Guatemala has approved the concession granting to an attorney of the International Light & Power Co. the privilege of refining petroleum and manufacturing various by-products.

NEW CONCESSION.

The President of Guatemala has granted a concession to a firm giving certain privileges in return for the establishment of a freight transportation service by wagons between Quetzaltenango and Huehuetenango. These cities are about 40 miles apart in a direct line. The section traversed lies on a high plateau having an average elevation of 8,000 feet.

PAN AMERICAN RAILROAD IN GUATEMALA.

Jordan H. Stabler, Esq., chargé d'affaires at Guatemala, reports:

The roadbed of the Pan American Railroad has been constructed from Las Cruces to the River Las Animas, 6½ miles, and timber has been cleared to the end of the nineteenth mile, nearly to the village of Coatepeque. Rails have been laid for 3½ miles. Work is progressing rapidly from Las Animas, 600 men being employed in grading. In some places a hydraulic system has been used.

Between Coatepeque and the Mexican frontier it has been planned to connect this branch of the road with that of Vado Ancho, so that the Ocos Railroad will form a part of the route to the frontier for a distance of about 8 miles. A section of the track 3 miles long will be constructed, starting from the Ocos Railroad at the El Prado estate and crossing the Melendres River by a new way. It will join the Pan American Railroad of Mexico on the Guatemalan side of the Suchiate River.

The bridge over the Talchulul River is to be 400 feet long and 75 feet high, and the bridges over the Batza and Talpiches Rivers are to be 500 feet long and 115 feet high. The construction of the foundations and piers of these viaducts is advancing rapidly. The structural steel has been ordered and will presently arrive from the United States.

HAITI

BUDGET FOR 1911-12.

In the budget law for the fiscal year 1911–12, voted by Congress on September 7 and signed by President Leconte on the 15th of the same month, the expenses are estimated at 6,000,000 gourdes and $360,000 American gold. The receipts have not yet been definitely established, but in case they are not sufficient to meet the running expenses of the Government, the minister of finance is empowered to secure the necessary funds under the most advantageous terms by negotiating for a public loan.

CONGRESS EXTENDS ITS SESSIONS.

On July 28 the House of Representatives passed a resolution extending the sessions of the present Congress, which convened on May 10, an additional month until September 10.

IMPORTANT CONCESSIONS SANCTIONED BY CONGRESS.

During its sessions of the 24th and 25th of July Congress approved the following important concessions:

A concession granted to Mr. J. Jeannot for the establishment of one or more flour mills in the Department of the South for the manufacture of wheat and banana flour.

A contract awarded to M. J. Rovigo for the construction of a stone breakwater in the harbor of Jacmel in order to protect the street of Ste. Anne from the inroads of the ocean during tidal waves.

The concession awarded to Mr. Allison M. Archer for the continuance of the irrigation of part of the Plaines of Caves is of special importance in the development of the country. This work includes the reconstruction, in cement, of the River La Ravine Dam, for a length of 57 feet, at the same point occupied by the former dam; reconstruction of the basin of general distribution at the head of the principal canal of Avezac; reconstruction or restoration of the canals of Avezac. The Haitian Government agrees to pay to the concessionaire a total amount of $250,000 for the execution of the work, which must be concluded within two years of the contract.

HONDURAS

NEW OFFICIAL PUBLICATION.

The Government of Honduras is to begin the publication of a monthly bulletin to be known as Boletin de la Secretaria de Fomento, Obras Publicas y Agricultura. As the name indicates, it will deal with matters relative to public works and agriculture. The latter especially will be given careful attention, as one of the chief objects of this publication is to encourage, advise, and aid in introducing modern methods in agricultural industries, including the raising of cattle.

MEAT INSPECTION STATION.

A veterinary station for the inspection of meat and cattle to be slaughtered is to be established by the Government. A study of the diseases of cattle and horses, free clinics, and the dissemination of modern veterinary science in a practical manner will constitute some of the functions of this new institution.

STEAMSHIP SERVICE.

From Claude I. Dawson, United States consul at Puerto Cortes, comes the information that the Government of Honduras has recently acquired a new vessel which will be devoted to the commerce of the country. To aid in this plan, a regular steamship service has been inaugurated between Trujillo, Roatan, Ceiba, Tela, and Puerto Cortes, with sailings every Wednesday from the last-named port, and affording suitable connection with the passenger steamer from New Orleans which reaches Puerto Cortes early Wednesday mornings.

RENEWAL OF BANANA EXPORTS.

An arrangement has recently been entered into between the banana planters along the Ulua River, the Monte Vista Transportation Co., and the United Fruit Co., which bids fair to solve the recurring transportation problems of the fruit growers of Honduras. According to the contract, states Consul Claude I. Dawson who submits the information, planters will receive 20 to 25 cents a bunch for bananas at the river's bank, depending on the season. The transportation company will receive 10 cents a bunch for transporting the fruit to the river bar, and ocean transportation will be provided by the third contracting party.

MEXICO

NEW CABINET.

A newspaper dispatch from Mexico City states that President Madero has announced his cabinet as follows:

Secretary of foreign relations: Sr. Lic. Manuel Calero.

Secretary of the interior: Sr. Don José M. Pino Suarez.

Secretary of justice: Sr. Lic. Miguel Diaz.

Secretary of public instruction and fine arts: Sr. Don Abraham Gonzales.

Secretary of promotion, colonization, and industry: Sr. Lic. Rafael Hernandez.

Secretary of communications and public works: Sr. Ing. Manuel Bonilla.

Secretary of finance: Sr. Don Ernesto Madero.

Secretary of war and marine: Sr. Gral. José Gonzales Salas.

BANK AT SALINA CRUZ.

A consular advice indicates that a branch of the Banco Oriental de Mexico has just been opened at the port of Salina Cruz, being the first institution of its kind to be established there.

FISHING CONCESSION.

A concession has been granted by the Mexican Government to a company giving them the right to establish fisheries of shrimp, lobsters, turtles, oysters, and all scale fish in territorial waters of the Republic between the mouth of the Colorado River and the port of Guaymas (but excluding both places) on the Gulf of California along the Sonora coast of Mexico. In return the company agrees to make certain payments to the Government as well as to maintain certain low prices for the products offered for sale.

MINING INDUSTRY IN SONORA.

United States Consul Alexander V. Dye reports from Nogales, Mexico, that during the six months ended June 30, 1911, titles were issued to 977 mining claims in Mexico, covering a surface area of 36,591 acres. Of this number about one-fourth were issued in the State of Sonora, the exact number being 244 claims, covering an area of 13,133 acres. In Sonora the largest number were located in the Altar district, viz, 43 claims covering 2,518 acres, although in the Montezuma district the 34 titles issued covered an area of 2,923 acres.

While there was some cessation of development work during the period, most of the producing mines kept up their normal output. The exports of minerals to the United States passing through the northern frontier ports of Sonora during the six months were as follows: Gold, $1,432,707; silver, $1,857,478; copper, 33,299,986 pounds, valued at $3,905,595; lead, 3,023,438 pounds, valued at $69,189; zinc, 154,637 pounds, valued at $3,337; total, $7,268,306.

NEW HOSPITAL.

Work has begun on the foundations of the new public hospital in the city of Saltillo provided for by the bequest of the late Henry Maas. This institution is to be modern in every particular and to cost about $150,000.

CONSULAR NOTES.

Charles B. Parker, United States vice consul at Mazatlan, has submitted a very interesting and enlightening report on agricultural profits in Mexico. The costs and profits of agricultural crops at different points in his consular district are given.

An immense reservoir is being contemplated for the Yaqui River Valley district and another about 10 miles above Hermosillo, on the Sonora River.

Shipments of oranges from San Luis Potosi to Chicago, Ill., have begun. It is estimated that 55 cars will constitute this season's exports as against 34 cars for last year.

A public service electric company is installing apparatus to bring electric current from San Geronimo to Salin Cruz.

NICARAGUA

EXPORTS TO THE UNITED STATES.

The exports from Bluefields, Nicaragua, to the United States for the year 1910 were as follows:

Bananas (1,658,721 bunches)	$680, 655
Coconuts (124,500)	11, 202
Gold bullion (37,540½ ounces)	527, 147
Hides (cattle)	3, 750
Rubber (294,631 pounds)	280, 876
Tortoise shell	625
Sundries	178
Total	1, 504, 433

COMMERCIAL ACTIVITY.

From United States Consul James W. Johnson, at Corinto, comes the information that three new Baldwin locomotives, two of 42 tons each and another of lighter weight, have been received and are now doing freight service between Corinto and Granada. The great increase in the amount of freight being handled in and out of this port necessitated these additional facilities.

The steamer *Angela,* for some time one of the Nicaraguan gunboats, has been transferred by rail to the lakes in the interior, where it will be engaged in passenger and freight traffic. The *Momotombo,* the largest of the Nicaraguan gunboats, is being dismantled and the machinery and other useful parts taken to Managua. The hull, it is said, will be sunk.

PANAMA

COMPETITION FOR STATUE OF HERRERA.

Attention is directed to a call for competitive designs for a bronze statue to be erected in Panama in honor of Gen. Tomas Herrera, one of the national characters of that country. The call is issued by the municipal council of Panama city, and bids will be received until January 10, 1912. The announcement calling for these designs states, in part:

> Sculptors who desire to send sketches and photographs should do so through the consul or representative of Panama in the country in which they reside, together with the amount for which they will do the work, as well as other details concerning its execution.

TO IMPROVE NAVIGATION FACILITIES.

As a result of the disaster to the steamship *Toboga,* the Government of Panama has sent out a board of inspectors to study the Pacific coast and make recommendations for the location of lighthouses. At present it is proposed to place lights at Cape Mala, Melones, Bonas, Tortolita Islands, and San Jose Island in the Pearl Islands.

HOTEL AT COLON BEACH.

Plans have been approved for a new hotel building of Spanish colonial style to be built by the Panama Railroad Co. in Colon Beach, at a cost of $500,000.

PARAGUAY

PROPOSED EUROPEAN PROPAGANDA AGENCIES.

A bill has been introduced into the Congress of Paraguay for the establishment of a number of propaganda agencies in Europe. It is proposed to furnish these agencies with samples of the principal raw and manufactured products of the country in order that they may be exhibited in the great European ports and commercial centers of the Old World as an advertising medium for the purpose of attracting capital and immigrants to Paraguay.

BANK OF THE REPUBLIC.

The Bank of the Republic of Paraguay, according to a report recently issued by its directors, will probably transact all of its banking operations hereafter on a gold basis. This will reduce the amount of yearly business done as far as the nominal number of dollars is concerned, but will not affect the actual business or profits of the bank.

CULTIVATION OF TOBACCO.

A partial census made by the Agricultural Bank of Asuncion, Paraguay, shows that the departments of the Republic having the largest area under tobacco cultivation are the following in the order of their importance: Piribebuy, Barrero Grande, Caacupe, Caazapa, Villarica, and Atyra.

In some of the tobacco-growing districts of the Republic the soil, in appearance, closely resembles the soil in Cuba on which the fine tobacco of that island is grown, and it is contended by some that proper attention to tobacco cultivation in some of these districts would enable a product to be grown equal to the Cuban tobacco.

SCHOOL OF ARTS AND CRAFTS.

The School of Arts and Crafts at Asuncion was recently opened for public instruction, with a large number of students, an able corps of professors, and a throng of visitors present at the opening ceremonies. This school is a model of industry and its equipment is of modern, up-to-date type. The future of the School of Arts and Crafts of Asuncion is most flattering, since it not only has the support of the Government, but also that of the most prominent and influential citizens of the Republic engaged in commerce and industry.

REORGANIZATION OF NATIONAL LIBRARY.

The National Library of Paraguay, at Asuncion, has recently been reorganized. Under the new régime the books are being classified, catalogued, and made more accessible to visitors and the reading public. The catalogue of the books in the library will soon be published under the personal supervision of Dr. Diaz Perez.

RAILROAD EXTENSION.

A consular advice from Paraguay conveys the statement that it is planned to extend the railroad now running from Buenos Aires to Resistancia (on the west side of the Parana River) some 300 kilometers north to Puerto Pilcomayo. This extension will necessitate the inauguration of a railway ferry service between Puerto Pilcomayo and Asuncion.

PERU

OPERATIONS ON WIRELESS EXTENSIONS.

The material for the installation of the direct wireless service between Lima and Iquitos, particulars of which were contained in the review of Peru (August issue of the BULLETIN), has arrived at Iquitos, and construction work on the office and tower has already commenced. This service when completed will enable wireless messages to be transmitted between Lima and Iquitos, a distance of 700 miles, without the use of intermediate stations, and will probably reduce the cost of transmission to about 4 cents a word.

ENCOURAGEMENT OF STRAW-HAT INDUSTRY.

The Government of Peru has appointed an expert instructor to teach the weaving of straw hats to girls in the training schools of Lima. This city offers a promising field for the development of this industry, inasmuch as it is an industrial center which can easily obtain an abundant supply of toquilla and other fine straws and which has an adequate supply of efficient and reliable labor.

BANKING IN PERU.

Illustrative of the possibilities of banking institutions in Latin America, the report for 1910 of the Banco Aleman Transatlantico shows net profits of over 14 per cent, from which, after making certain reserves, a dividend of 9 per cent was paid to stockholders.

SALVADOR

NEW CURRENCY.

According to an advice from the United States Vice Consul General Harold D. Clum at San Salvador, the Government of Salvador has contracted with the four banks of San Salvador for the coinage abroad and the introduction of silver pieces of 5, 10, and 25 centavos, aggregating 300,000 pesos. About $120,000 United States gold fractional currency in circulation in Salvador now consists of silver reales ($12\frac{1}{2}$ centavos), $\frac{1}{2}$-real pieces ($6\frac{1}{4}$ centavos), and quartillos ($\frac{1}{4}$ real or $3\frac{1}{8}$ centavos).

PORT OF EL TRIUNFO OPENED.

The port of El Triunfo has been opened for both export and import traffic and a customhouse established there. This will afford easy communication with the rich eastern zone of the Republic, comprising the Department of Usulatan and a large part of La Paz.

UNITED STATES

PRESIDENT TAFT AT PANAMA-PACIFIC EXPOSITION.

On October 14 President William H. Taft turned the first spade full of earth at the ground-breaking exercises of the Panama-Pacific Exposition, San Francisco, California.

SCHOOL OF TROPICAL MEDICINE.

An important and advanced step toward the study and prevention of certain tropical diseases has been taken by the Tulane University of Louisiana. With the exception of the Rockefeller Institute, there is no systematic effort at present operating in this direction, and the new School of Tropical Medicine and Hygiene in New Orleans, which was inaugurated as part of the medical department of Tulane University, on September 29, 1911, marks a most progressive move and one which is worthy of the utmost support.

INCREASED ATTENDANCE AT COLUMBIA UNIVERSITY.

Because of the interest and attention which Columbia University has always shown in affairs Latin American, patricularly in the matter of such courses offered to students, it is gratifying to note that the registration for this year exceeds that of 1910 by 626. The university boasts of an attendance of 7,468, and, including the extension courses, the number is only 8 short of 8,000. This places Columbia at the head of all other universities in the world in point of attendance, taking the place of Berlin, which stood at the head last year.

URUGUAY

REORGANIZATION OF DEPARTMENT OF PUBLIC WORKS.

The new law reorganizing the department of public works creates nine main bureaus or sections with many subdivisions. A council of public works is also established, while the national department of engineers and other technical offices are abolished, the duties of these being distributed among the different bureaus. A permanent budget of public works, to be included in the general budget, is also provided for. The executive is empowered to issue the rules and regulations making the law referred to operative.

ENCOURAGEMENT OF IMMIGRATION.

One of the recent laws passed by the Congress of Uruguay and duly promulgated by the President of the Republic, encourages immigration by advancing passage money to certain classes of immigrants and by furnishing transportation to them from the Federal capital to their respective points of destination in the interior of the Republic. It also provides for the erection of an immigrants' hotel at Montevideo. The Government will cooperate with the Bank of the Republic in this work.

The Government is also encouraging agriculture. Beginning with January 1, 1915, competitive agricultural exhibits will be held in each Department of the Republic, and $180,000 annually will be distributed in prizes in the different Departments of the nation, not including Montevideo. These prizes are to be given to stock farmers who have ranches, not exceeding 500 hectares, between 500 hectares and 1,000 hectares, and between 1,000 hectares and 2,000 hectares. Ranches larger than 2,000 hectares will be accorded honorary prizes.

BANK OF THE REPUBLIC.

The Bank of the Republic has been authorized to increase its capital to $20,000,000. This bank has now become an exclusively State institution. The text of the decree modifying the charter is contained in the official newspaper of July 26, 1911.

DEEPENING OF THE RIO NEGRO.

The Rio Negro is to be dredged so as to permit vessels of a draft not exceeding 1.8 meters to navigate from its mouth to Paso de Los Toros. Public landings will be provided by the Government at different points, while private landings may be constructed with the consent of the Government.

The executive is authorized to contract ad referendum a loan of $3,000,000 for the cost of the work, which is to be completed within four years. A slight annual tax will be levied on the property of riparian owners within a zone of 15 kilometers from either side of the river's banks as their share of the expenses in making the river navigable. A small toll will also be placed on river traffic making use of the completed waterway.

ACQUISITION OF MARBLE MINES BY THE STATE.

Valuable marble quarries in the Department of Minas, Republic of Uruguay, have been acquired by the Uruguayan Government. The stone extracted from these will be used to supply the marble necessary for the construction of the legislative palace. The stone from these quarries, however, is not true marble in the strict and technical sense of the word, but rather a fine building stone, so much like marble that for all practical purposes it may be considered as such. It takes an excellent polish, and its hardness and durability enable it to resist the disintegrating effects of the atmosphere and weather better than real marble, and therefore makes it more desirable than marble as a building material.

PANDO PARK.

The Congress of Uruguay has authorized the President to purchase 30 hectares of land on the banks of the Pando River, as well as a tract of land between the Minas Railroad and the Maldonado highway, for parking purposes, the exact site of the park to be determined by the executive. Rowing and swimming schools will be established and athletic games provided for in this park.

VENEZUELA

ANNUAL BUDGET.

A consular report from La Guaira states that the Venezuelan Government's budget estimates the Government income for the fiscal year beginning July 1, 1911, as follows: Import customs duties, $4,313,550; surtax, $2,372,451; cigarette papers and stamps, $1,158,000; salt works, $772,000; liquor taxes, $617,600; interest, $57,900; transit tax, $67,550; consular service, $82,990; telegraphs and cables, $46,320; match taxes, $38,600; other sources, $341,484 total, $9,868,445.

Out of this sum the following appropriations are to be made: Department of the interior, $2,152,891; department of foreign relations, $196,474; department of finance and public credit, $3,625,679; department of war and marine, $1,537,933; department of commerce and promotion, $653,621; department of public works, $579,000; department of public instruction, $661,399; rectifications and extraordinary expenditures, $443,349.

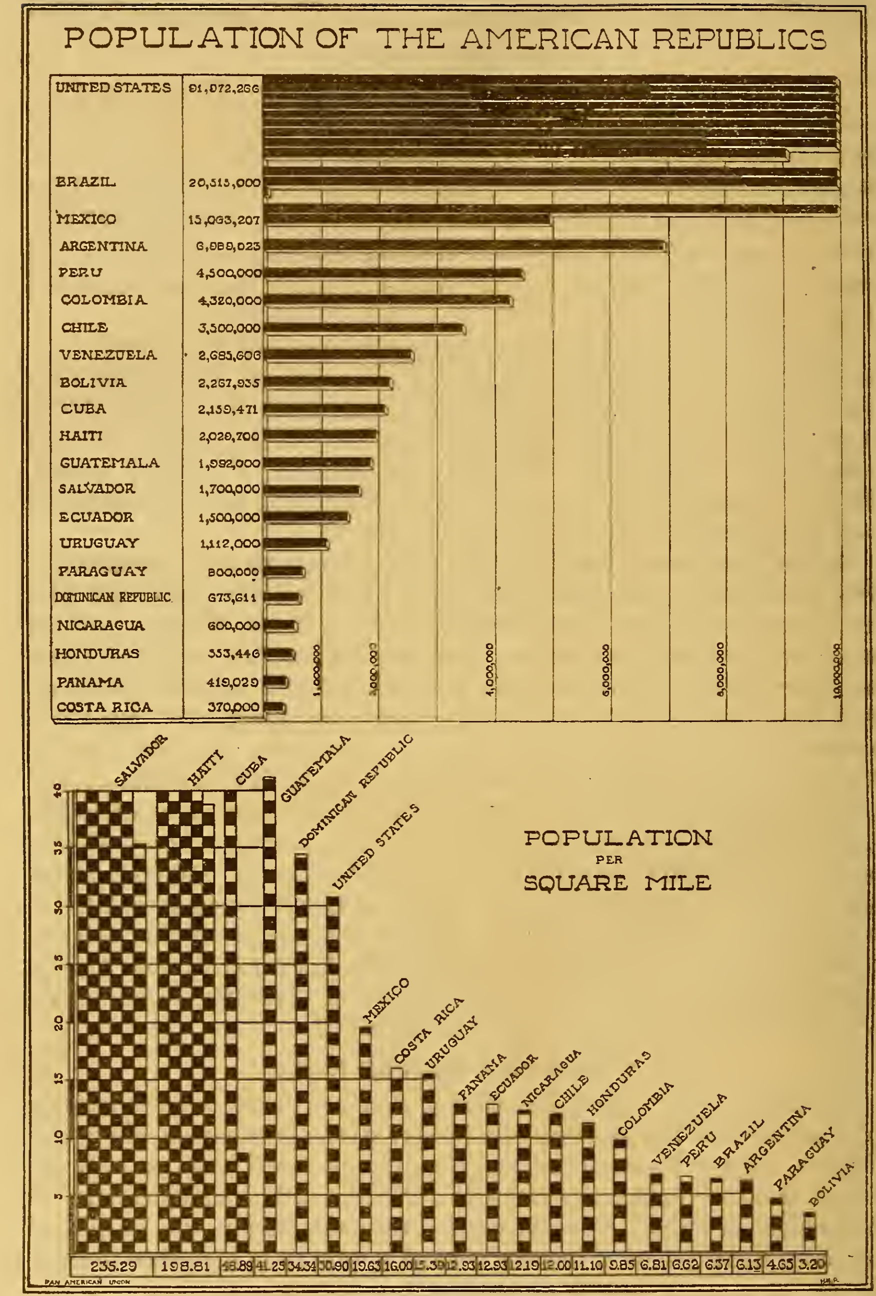
Among the most interesting of the appropriations are the following: For the military hospital at Caracas, $10,000; military bands, $60,448; military academy, $17,445; sanitation of the army, $6,750; clothing of army, etc., $78,750; rations, $48,250; for the dry dock and shops at Puerto Cabello, $31,560; naval school, $7,720; military pensions, $59,830; administration of mails, $138,150; telegraphs, $384,280; telephones, $10,230; technical bureau in ministry of public works, $8,320; for road repair and construction, $273,821; aqueducts and public buildings, $273,821; for universities in department of public instruction ,$51,378; Federal colleges, $67,332; normal schools, $6,440; academies, $46,074; subventions to private schools, $10,000; prizes and premiums, $10,000; 10 students in national concourses, $2,970; 6 scientific students in Europe, $5,940; 4 students of fine arts, in Europe, $4,632; 1 student in normal school, United States, $1,505; special schools, $1,667; popular instruction, $20,380; second-grade schools, $60,216; first-grade schools, $308,107.

VENEZUELA HONORS HAITI.

On July 5, 1911, President Gomez signed a decree for the naming of a square and the erection of a bronze statue in honor of Alexandre Petion, former President of the Republic of Haiti, who so ably assisted Bolivar during the struggle for the political independence of Venezuela in 1816. The statue of President Petion will be placed upon a granite pedestal bearing several appropriate historical inscriptions.

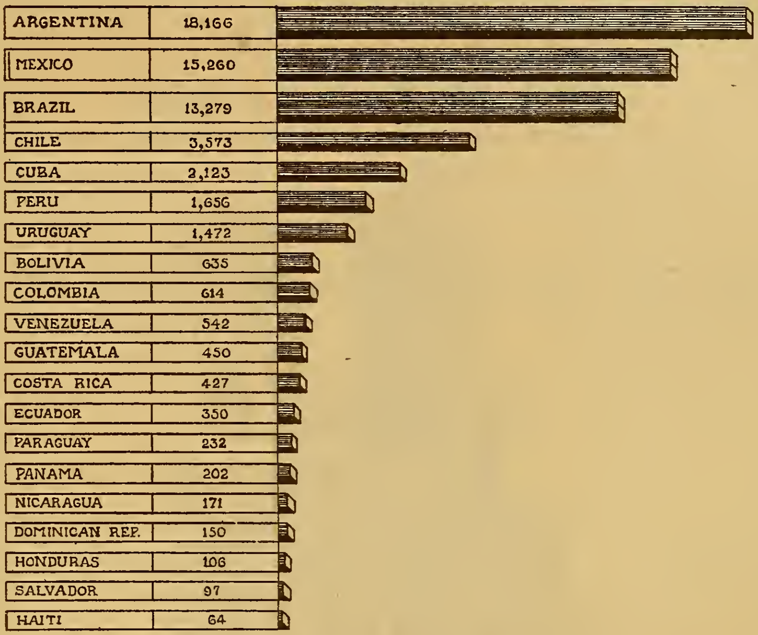
MINING IN ZULEA.

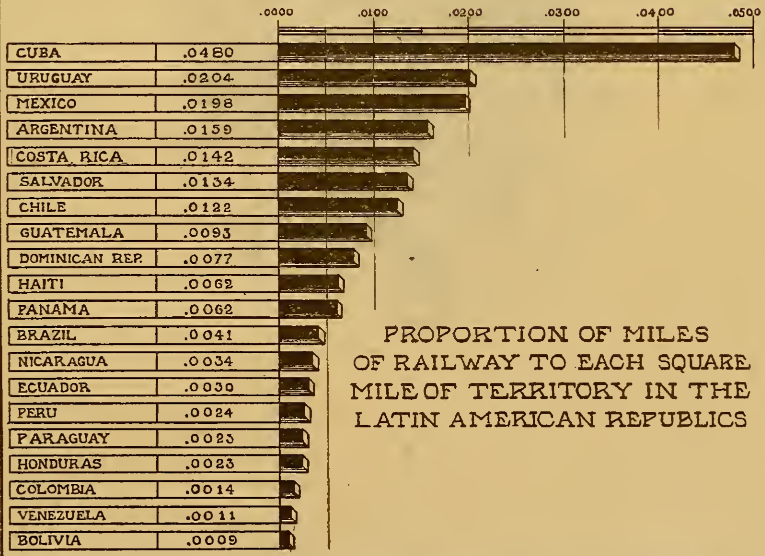
An expert mining engineer has completed an investigation of certain mineral deposits in the State of Zulea. He reports favorably on the prospects for immediate development of coal and petroleum fields.



POPULATION OF THE AMERICAN REPUBLICS

RAILWAY MILEAGE
OF
LATIN AMERICA

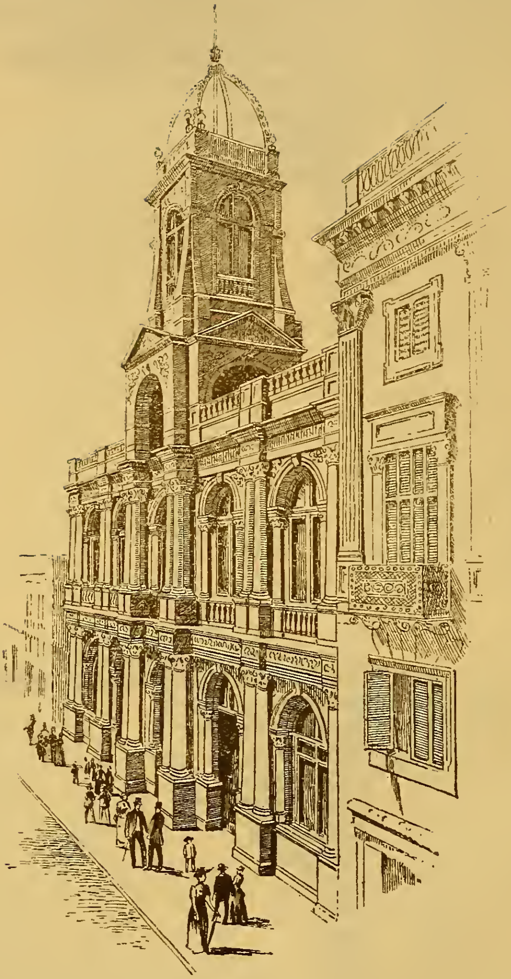




PROPORTION OF MILES OF RAILWAY TO EACH SQUARE MILE OF TERRITORY IN THE LATIN AMERICAN REPUBLICS

PAN AMERICAN UNION
WASH., D.C.

H.M.R.



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SR. DON FRANCISCO I. MADERO.

President of the Republic of Mexico, inaugurated November 6, 1911.

BULLETIN
OF THE PAN AMERICAN UNION

VOL. XXXIII NOVEMBER, 1911. NO. 5

WHEN an unsolicited and unexpected opinion upon the work of the Pan American Union comes from a great newspaper which draws its conclusions from practical facts, and which has a high standing for the authority and reliability of its utterances on institutions, policies, and men, it is fitting that it should be quoted for the benefit of those who are interested in the real results which the Pan American Union is achieving. In its issue of Friday, October 6, 1911, the Chicago Evening Post, recognized as one of the principal newspapers of the United States, contains the following editorial comment under the title of "Our trade with Spanish America:"

> During this month 400 ships will leave this country for ports in Mexico, Central and South America, and the West India Islands. The Bureau of Statistics of the Department of Commerce and Labor has just issued a bulletin giving the October sailing dates of vessels engaged in commerce and bound from the United States to American countries at the south.
>
> The growth of commerce between the United States and the Spanish-American countries has been extraordinarily rapid in the last few years. Imports from the southern lands have grown from a value of $212,000,000 ten years ago to $386,000,000 in 1911, and the exports in the same time have grown from $130,000,000 to $290,000,000.
>
> In this showing of the growth of trade between the countries of the American Continent is to be found an answer to the objections made some years ago by Members of Congress to the establishment in Washington of the Bureau of American Republics, now known as the Pan American Union. It has been the constant effort of the officials of the union to promote not only peace but commerce between the countries of the two western continents.

* * * * * * *

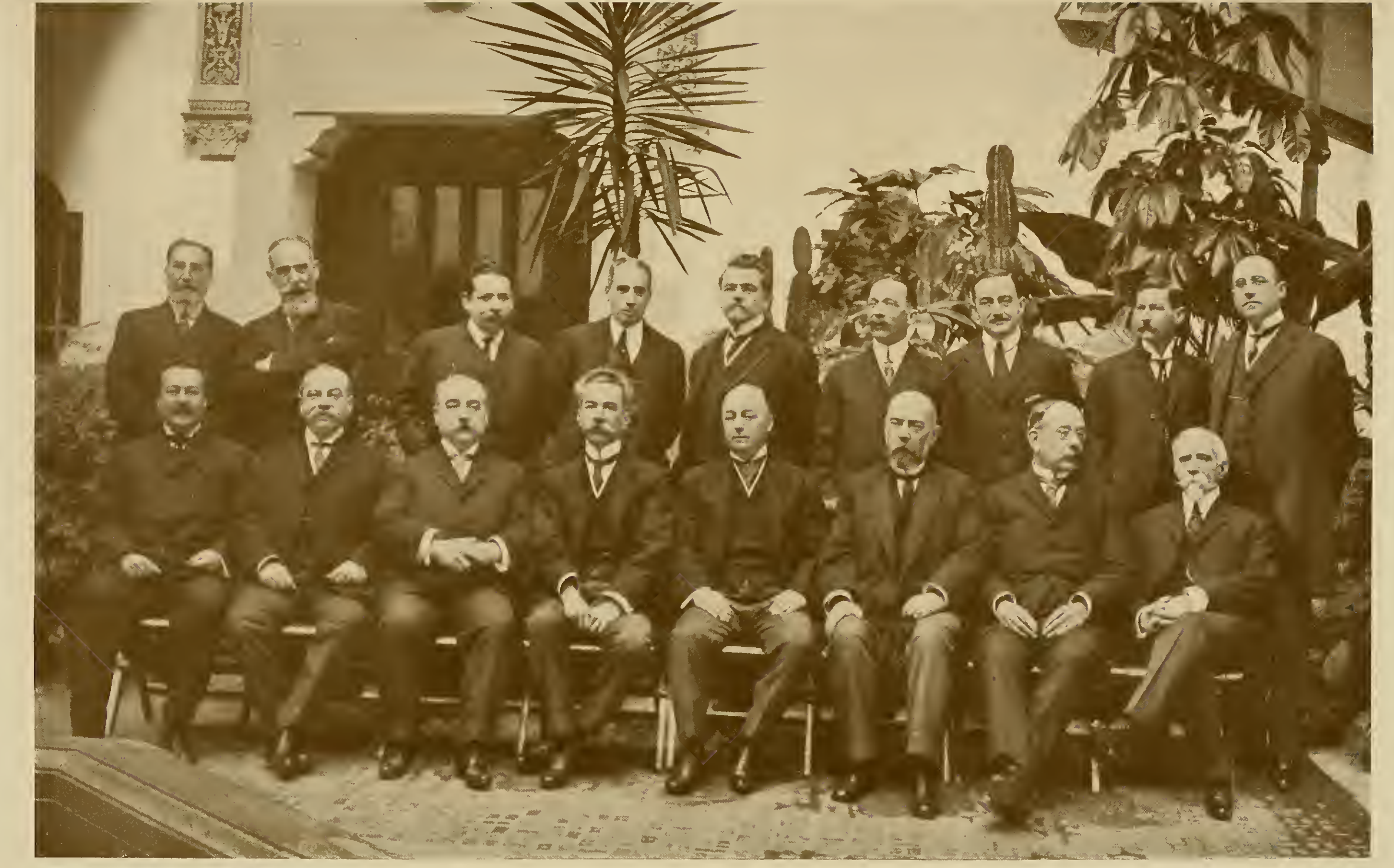
WORLD-WIDE RECOGNITION OF THE PAN AMERICAN UNION.

In a document issued by the American Association for International Conciliation, dated October, 1911, Senator H. La Fontaine, of Belgium, president of the International Peace Bureau, makes a complimentary reference to the Pan American Union and the practical usefulness of the work it is doing, and uses it as an example and reason for the creation of a Pan European, Pan Asiatic, Pan Australian, and a Pan African organization holding at various times international conferences like the Pan American conferences. This comment by Senator La Fontaine is another illustration of the growing recognition of the Pan American Union which is being given it by the prominent and thinking men of all nations, and there could be no better evidence of its substantial influence than such recognition. In this connection it can be stated that the requests and subscriptions for the MONTHLY BULLETIN which are now being received from all parts of the world, from Europe and Asia as well as from the United States and South America, further demonstrate the growing world-wide interest in the work and scope of the Pan American Union.

An indication of the popularity of the MONTHLY BULLETIN which is gratifying is the fact that out of the eight issues which have thus far appeared this year, the supply of half of these editions, both in English and in Spanish, has been entirely exhausted. Time and again it has been found necessary to return requests for back numbers of the BULLETIN because of the union's inability to supply them, and this condition bears out the statement which has often been made in the columns of this publication that the demands from all over the world for the BULLETIN exceed the limited edition which is available.

WILLIAM ELEROY CURTIS.

In the October issue of the MONTHLY BULLETIN there was published under the head of "Prominent In Pan American Affairs" a biographical sketch of William Eleroy Curtis, who died suddenly on October 5. It was too late then for the preparation of any editorial reference to Mr. Curtis, but the Director General now takes advantage of the first opportunity to record, on behalf of the Pan American Union, its staff, and himself, an expression of the great loss which has come to Pan American affairs and relations by the taking away from the field of activity so forceful and remarkable a man as William Eleroy Curtis. Although 18 years have passed since he resigned his position as the Director of this institution, he nevertheless maintained to the time of his death a keen interest in its welfare and development. During the four and one-half years that the present Director General has acted as its executive Mr. Curtis never failed to respond to requests for advice and cooperation in any plans for the extension of the work of the Pan American Union or the bringing closer together of the American Republics in ties of friendship and commerce. He was an active member of the Pan American Committee which was organized as a result of the action of the Pan American Conference held at Rio de Janeiro in 1906, and he continually prepared articles about the Pan American Union and the countries of Latin America in his newspaper correspondence which were read by a large constituency. It is not necessary here to comment upon other features of Mr. Curtis's useful and interesting life because they are so well known and have been so generally discussed by the news-



Photograph by Harris-Ewing.

THE GOVERNING BOARD AND EXECUTIVE OFFICERS OF THE PAN AMERICAN UNION.

Photograph taken in the Patio of the Pan American Union Building after the meeting of the Governing Board, Wednesday, Nov. 15, 1911. Seated, from left to right, are: The Minister of the Dominican Republic; the Minister of Salvador; the Minister of Costa Rica; the Ambassador of Brazil; the Secretary of State of the United States; the Ambassador of Mexico; the Minister of Bolivia; the Minister of Venezuela. Standing, from left to right, are: The Assistant Director of the Pan American Union; the Minister of Chile; the Minister of Nicaragua; the Minister of Argentina; the Minister of Uruguay; the Minister of Cuba; the Chargé d'Affaires of Peru; the Chargé d'Affaires of Panama, and the Director General of the Pan American Union.

papers of the country. Suffice it to state that as long as the Pan American Union exists and the movement continues to develop Pan American commerce, friendship, and peace, the name of William Eleroy Curtis will always hold a position of unique and notable prominence.

A NEW PORTRAIT OF JAMES G. BLAINE.

The director general wishes to express his appreciation to Mrs. Harriet Blaine Beale, daughter of the great Pan American statesman, James G. Blaine, and to the distinguished artist, Mr. Aug. Franzen, of New York, for their courtesy in loaning to the Pan American Union a portrait of Mr. Blaine, recently executed by Mr. Franzen, and regarded by his family and friends as possibly the most lifelike which has yet been painted. It has been placed upon the walls of one of the principal rooms of this institution, where it can be seen by all those who may be interested in viewing an accurate likeness of one of the greatest constructive statesmen of American history.

HONORS FOR THE UNITED STATES AMBASSADOR OF MEXICO.

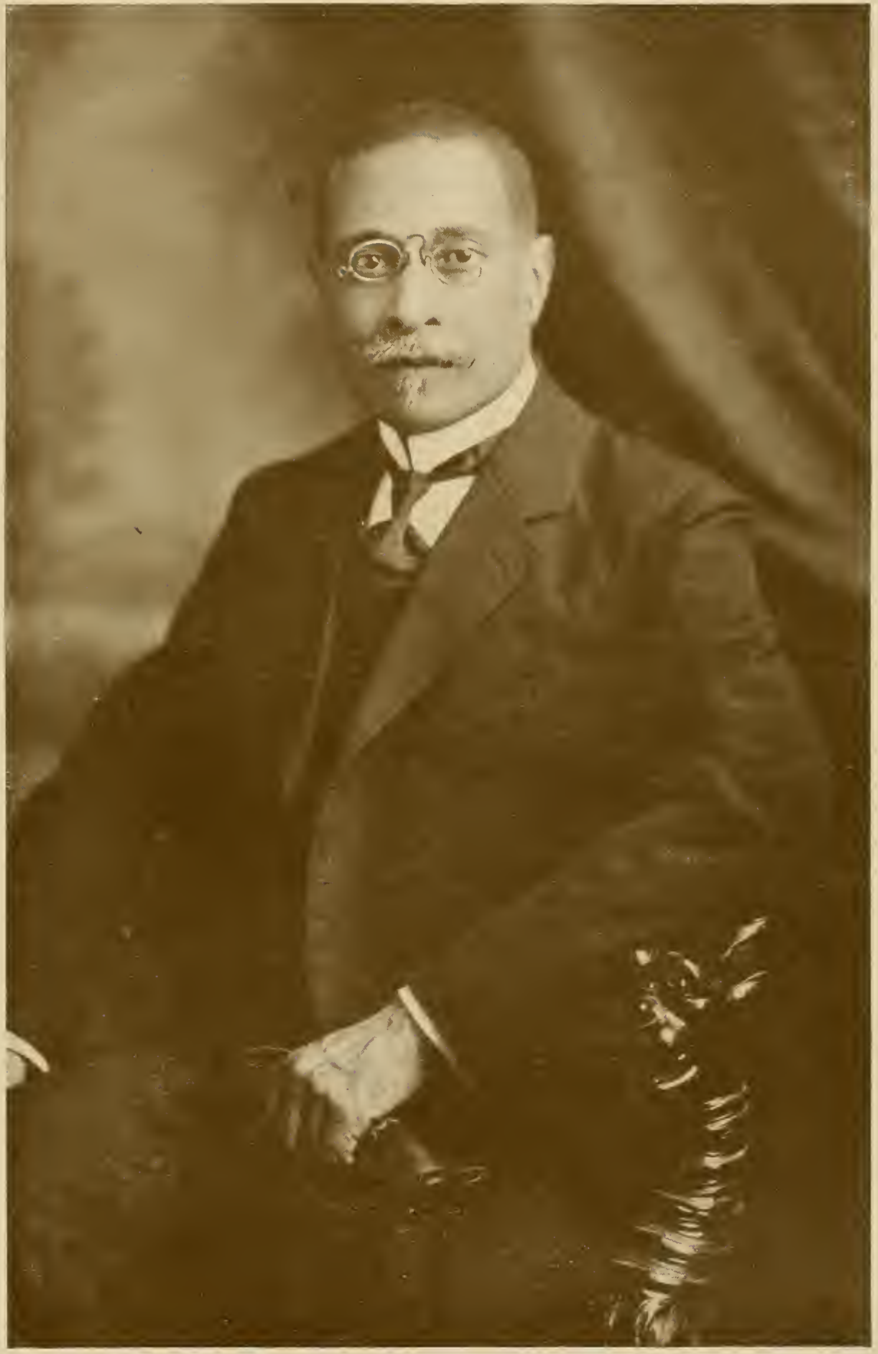
Hon. Henry Lane Wilson, the ambassador of the United States to Mexico, was shown an exceptional honor upon his return to Mexico City after a brief vacation following his strenuous labors during the time of the difficulties in that country. It was a genuine tribute to his abilities and popularity, of which he may well be proud. The Mexican Herald, in introducing its description of the banquet, said:

> The Americans in Mexico paid fitting tribute to their ambassador last evening. One of the largest banquets ever given by the colony was tendered to the Hon. Henry Lane Wilson, with the double purpose of extending to him a welcome on his return from the United States and to express appreciation of his excellent record here during the trying times of the past year.

In this connection it is interesting to note that the University of Chile, through the Chilean minister in Mexico, Sr. Don Anselmo Hevia Riquelme, conferred upon Ambassador Wilson the degree of doctor of philosophy on account of his intellectual achievements and the educative work he has contributed to American history. The honor has a special significance in that Mr. Wilson is the first American upon whom the University of Chile has conferred this degree.

A POPULAR LATIN AMERICAN DIPLOMAT.

When Sr. Don Alberto Yoacham, secretary of the Chilean legation in Washington, and at several different times chargé d'affaires of Chile, left the United States the latter part of September to return to his country after many years of absence in the diplomatic service, he took



Photograph by Harris-Ewing.

MONS. SOLON MENOS,

The new Envoy Extraordinary and Minister Plenipotentiary of Haiti to the United States.

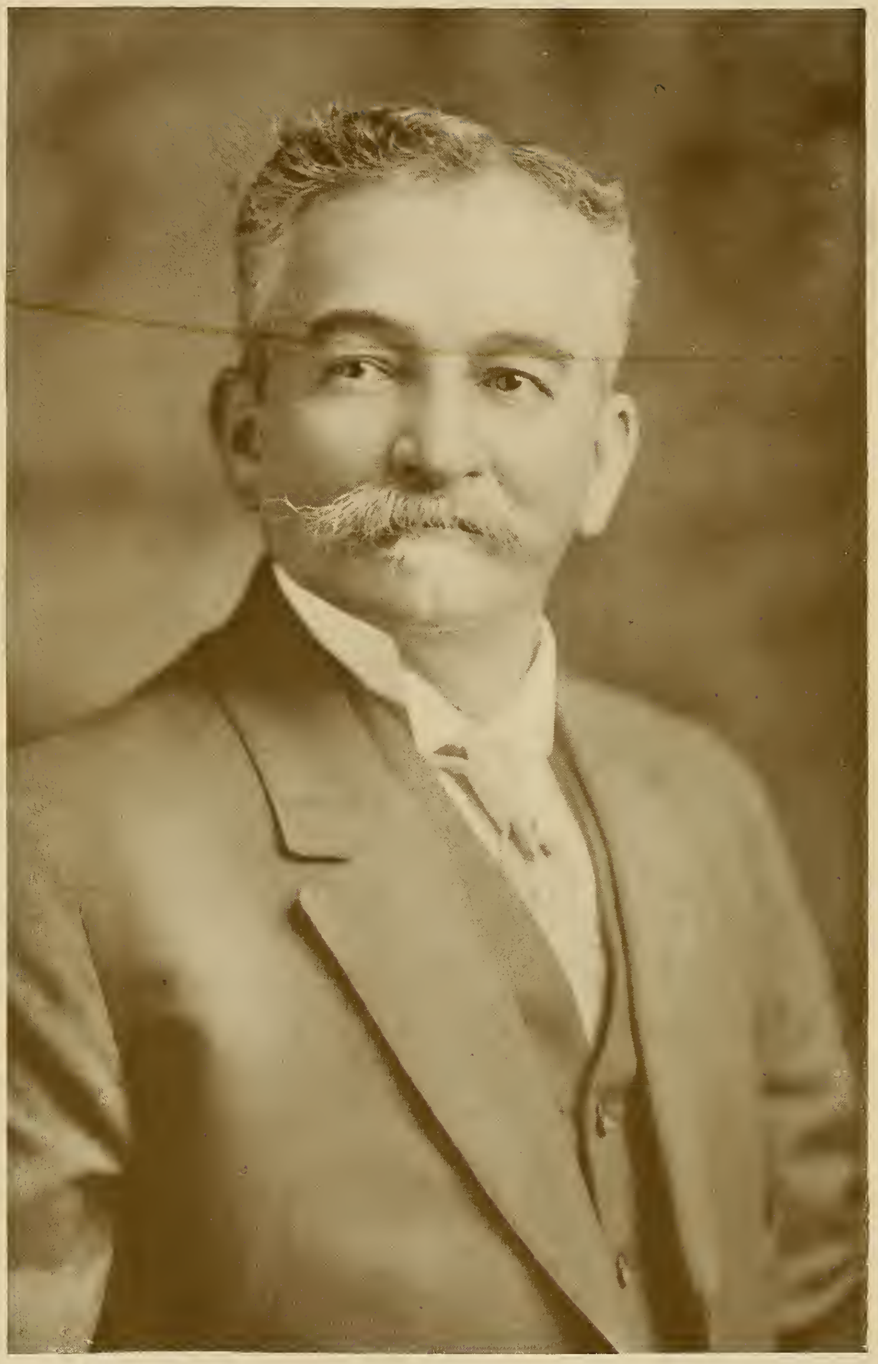
with him the best wishes and the sincere esteem of nearly all those persons who had come in contact with him during his stay in the United States. Not only in his capacity as a diplomatic officer, but in his conduct as a gentleman in society and in the clubs of the capital he created a distinct and enviable place for himself. There is no doubt that he was a most efficient influence in making Chile well known and highly regarded among the thinking men not only of Washington but of New York and other centers of the United States. His efforts in the development of good feeling and cordial understanding between the United States and Chile were notable. It is the hope of his friends in the United States that he may receive due recognition from his country for his services in its behalf and that soon he may be honored with promotion to the position of minister. As a member of the governing board of the Pan American Union he always showed deep interest in the welfare of this institution and gave the director general and his staff that assistance and cooperation which is always appreciated.

AN ADDRESS BY THE ASSISTANT DIRECTOR.

On Monday, October 23, there was held in Boston, the annual meeting of the directors of the International Institute for Girls in Spain. In accordance with an invitation extended by the American representative, Miss Amy F. Roland, Mr. Francisco J. Yánes, the assistant director of the Pan American Union, delivered an address on this occasion which was most favorably received. A few extracts from it are given elsewhere in this issue of the BULLETIN.

PRACTICAL PREPARATION FOR THE PANAMA CANAL.

Congratulations should be extended to Mr. Bernard N. Baker, of Baltimore, for the successful launching of his plan for the organization of a great steamship company, under the name of the "Atlantic & Pacific Transport Co.," which is to build a fleet of merchant, passenger, and mail vessels to operate through the Panama Canal. In the prospectus issued by Mr. Baker and his associates it is described as "a great steamship company organized to meet a great business opportunity." The Atlantic & Pacific Transport Co. proposes to establish a line of steamers from New York, stopping at Charleston or Savannah, or both, also from New Orleans through the Panama Canal to San Diego, Los Angeles, San Francisco, Portland, Seattle, and return. The amount of the total authorized capital stock of the corporation is $15,000,000. It plans to build 15 steamers, the design for the construction of which will be submitted to both the War and Navy Departments for their approval, provided the United States Government will enter into contract with the company for certain privileges and rights in connection



Photograph by Harris-Ewing.

SEÑOR DON RICARDO ARIAS,

The new Envoy Extraordinary and Minister Plenipotentiary of Panama to the United States.

with carrying the United States mail and using the Panama Canal. It is stated that the company agrees to build at once, at least 10 steamships of 6,000 gross registered tons capacity (including cargo, coal, and stores), of a sustained speed of 16 knots per hour, and otherwise complying with all of the conditions of the act of March 3, 1891, providing for ocean mail service between the United States and foreign ports, and to undertake to construct later, as required, 5 additional steamers of the same class and character. The men behind the company are authorities on deep-sea transportation business and have studied carefully the details and conditions of the Panama route. The president, Mr. Bernard N. Baker, was president of the Atlantic Transport Co. and is one of the best-known business men of Baltimore. Of late years he has been very prominently connected with the conservation movement and he can be further described as a man of world-wide interests. Associated with him is Mr. Adrian H. Boole, who has had 25 years' experience in the north trans-Atlantic steamship business, and who has devoted a great deal of time investigating the possibilities of commerce and trade through the Panama Canal. It is suggested that all persons who are interested in learning more about the plans of the Atlantic & Pacific Transport Co. should communicate with its office in the Calvert Building, Baltimore, Maryland. It has issued two interesting pamphlets which provide instructive reading on the subject of the Canal and the plans of this new corporation.

MAJ. KERBEY'S ARTICLE ON THE AMAZONIA.

Special attention is called to an article in this issue of the BULLETIN entitled "Amazonia," prepared by that veteran authority on Brazil, Maj. Joseph Orton Kerbey, who has recently returned from another visit to the Amazon and its surrounding country. Maj. Kerbey was at one time consul of the United States at Para and has made many visits to the Amazon and its principal ports. In view of the growing interest in that great river and the country which it drains, this article will be found to provide much instructive information.

MR. SANTAMARINA'S ARGENTINE TRADE CONFERENCE.

Mr. J. P. Santamarina, the well-known lecturer, writer, and expert on Argentine trade relations, is to be congratulated upon his efforts to expand trade between his country and the United States. On Tuesday, October 10, in New York City, he conducted what was described as the "First Argentine Trade Conference in the City of New York," which was attended by a large number of representative exporters, importers, and

Photograph by Clinedinst.

SEÑOR DOCTOR BELISARIO PORRAS,

Retiring Minister of Panama to the United States.

Dr. Porras held the post of envoy extraordinary and minister plenipotentiary of Panama to the United States since the 4th of February, 1911, and while a member of the Governing Board of the Pan American Union, he took great interest in the progress and welfare of that institution.

manufacturers of that and other cities. The exercises were opened with an address by Mr. Hugh Gordon Miller, a lawyer of New York City, who, in turn, introduced the director general of the Pan American Union, and he, in turn, presented to the audience Mr. Santamarina. In a subsequent issue of the BULLETIN it is hoped that extracts can be published from Mr. Santamarina's address, which was one of the most illuminating, instructive, and comprehensive which has ever been delivered in this country upon the commerce, material opportunities, and progress of Argentina. Aside from his main address, he invited those present to ask any questions which came to their mind in order that he might answer them in a practical manner. It is to be hoped that Mr. Santamarina will be able to hold more conferences in other cities of the United States, and in that way help to awaken the business men of this country to an appreciation of the opportunities of trade development in Latin America.

A MEMBER OF THE PAN AMERICAN UNION STAFF IN SOUTH AMERICA.

About the 1st of October, Capt. Granville R. Fortescue, of the staff of the Pan American Union, started on an extended tour of South America, going south by way of Panama Canal and the west coast, with the intention of returning through Argentina and Brazil. During his travels he is making a special study of the conditions of trade exchange between those countries and between them and the United States, and is preparing a series of articles which will appear from time to time in the MONTHLY BULLETIN. He will also attend the Fifth International Sanitary Conference which is to be held in Santiago, Chile, November 1–12, 1912. In a communication received from him written at Panama he comments interestingly upon the work of construction on the canal, and recommends that a model of it should be placed in the Pan American Union building in Washington, a suggestion which will be carefully considered and may possibly be carried out through the cooperation of Col. Goethals, chairman of the Isthmian Canal Commission.

ANNUAL REPORT OF THE ISTHMIAN CANAL COMMISSION.

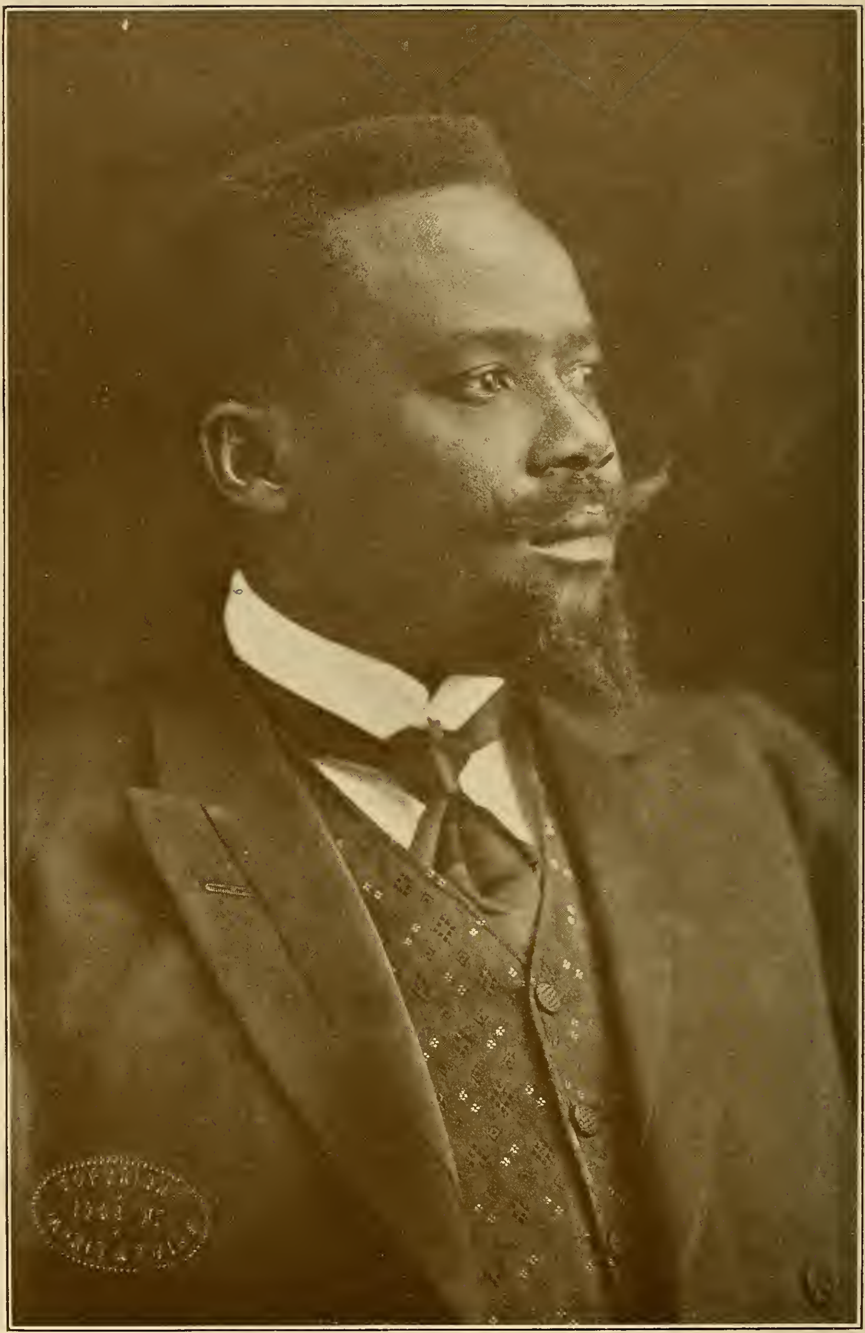
About the middle of October there appeared in the press of the United States a résumé of the Annual Report of the Isthmian Canal Commission. A reading of that brief statement should prompt every person interested in the canal to study the full report. It contains a remarkable statement of facts and points out the imperative need of legislation by Congress on the subject of tolls, the administration of the canal when opened, and the control of the utilities in connection with the canal. It is not necessary here to praise the work or commend the views of Col. George W. Goethals, the eminent engineer who is at the head of the commission and directing the work of construction. Who he is, what he has done and is doing, are so well and generally known not only in this country but all over the world that it is simply necessary to remark that it would seem as if the Congress of the United States would be acting with entire wisdom if it accepted, almost without modification, his recommendations on matters affecting the general administration of this great waterway.

ARCHER HARMAN—A GREAT RAILROAD BUILDER.

It is a remarkable coincidence that only a few days after Mr. William E. Curtis suddenly died, Mr. Archer Harman was accidently killed by being thrown from a horse at Hot Springs, Virginia, on October 9. As Mr. Curtis stood among the foremost writers and descriptive authorities on Latin America, so Mr. Harman stood in the front ranks of those who were carrying through great material enterprises in South America. Mr. Harman should be classed as one of the pioneer railroad builders of the southern continent, because it was his genius, energy, and confidence that made it possible to construct the railroad from Guayaquil, on the coast of Ecuador, up the precipitous sides of the Andes and along the main plateau of that country to its capital, Quito. He had that combination of imagination with zeal and courage which enabled him to picture the future of Ecuador and the advantages to it of such a railroad despite the handicap of tremendous engineering difficulties. Any person who has made the trip by rail from Guayaquil to Quito can not fail to admire the man who dared to undertake such construction. Although he encountered many obstacles, not only of a physical but of a political character, in building the road, and at times was discouraged by unfortunate events, he persisted until he had accomplished an engineering feat that is surpassed by few if any in the world. It is indeed a pity that he could not have lived to enjoy longer the fruits of his effort.

OFFICIAL HANDBOOK OF THE PANAMA CANAL.

The Pan American Union is indebted to Mr. Joseph Bucklin Bishop, the secretary of the Isthmian Canal Commission, for his placing in its hands a considerable number of the second edition, revised and enlarged, of the Official Handbook of the Panama Canal, compiled by him. It is a most interesting, instructive, and concise document, giving just the facts in the fewest possible words which the great majority of persons wish to know in regard to this wonderful artificial waterway. If any person reading this editorial is desirous of obtaining a copy, one will be gladly sent to him upon application to the Pan American Union.



Photograph by Harris-Ewing.

MONS. H. PAULEUS SANNON,

Retiring Minister of Haiti to the United States.

Mons. Sannon was received in the month of March of 1909 by the President of the United States as envoy extraordinary and minister plenipotentiary of Haiti to the United States. While Mons. Sannon was a member of the Governing Board of the Pan American Union he always tried to cooperate in behalf of the progress of that institution.

THE OPINION OF A GREAT WESTERN NEWSPAPER.

The Indianapolis News, one of the great newspapers of the Central Western States of the United States, recently published the following comment on the book entitled "The Pan American Union," prepared by the director general:

> Apropos of the current discussion of international peace, a timely publication is The Pan American Union—Peace, Friendship, and Commerce, by John Barrett. After an unusually wide experience in diplomatic service and international affairs, Mr. Barrett, in 1906, became director general of the International Bureau of American Republics, thus at once enlarging and localizing the scope of his work. In this capacity he has been very influential in developing good understanding and relations among American Republics and laying the foundation of international peace. The Pan American conference held at Buenos Aires in 1910 effected a voluntary organization of the 21 American Republics, including the United States, under the name of the Pan American Union, and Mr. Barrett adopts that as the appropriate title of a book designed to promote continental peace. The contents of the book are well arranged. In the first chapter, "Pan America to-day," the author describes in brief terms a considerable portion of its field of effort—Latin America, a wonderland of progress, resources, and opportunity. The second chapter, "The Pan American Union," elaborates upon the organization and gives interesting facts, which will surprise many persons. The third, "The Pan American Building," tells the story of the beautiful and practical edifice which is the permanent home of the union. The fourth, "Pan America and peace," reviews the remarkable honor record of the American nations in behalf of peace and its persuasive handmaiden, arbitration. The fifth, "Pan American speeches," is a collection of historical and notable utterances by distinguished statesmen upon Pan American solidarity of interest and unity of purpose.
>
> The appendix contains the names of the governing board, new statistics of Pan American trade, Mr. Carnegie's celebrated speech, "War as the mother of valor and civilization," and a list of differences between the American nations which have been settled by arbitration. The book is dedicated to Andrew Carnegie, "whose sincere interest in the cause of world-wide peace and in the upbuilding of lasting friendship among the American nations inspired him to that generosity which has made possible the new home of the Pan American Union." Further information regarding the scope of the work here outlined can be obtained by writing to John Barrett, Pan American Union, Washington.

THE HAMBURG-AMERICAN CRUISE TO SOUTH AMERICA.

The Hamburg-American Line has issued an attractive pamphlet entitled "Third Grand Cruise to South America," which will be made by the twin-screw steamer *Bluecher*, of 12,500 tons, leaving New York January 20, 1912, and includes visits to Brazil, Argentina, Uruguay, the Strait of Magellan, Tierra del Fuego, Chile, St. Thomas, Trinity, and Barbados, with two optional overland trips across the Andes. It is a source of satisfaction to encourage through the columns of the BULLETIN the efforts of the Hamburg-American company to make these cruises successful, and it frankly and freely advises everyone of the constituents of the BULLETIN who has any time for travel abroad to undertake this trip. The director general urged the company to inaugurate its first excursion of this kind, and he is therefore much gratified to be aware of their practical success, and congratulates the men in charge of these cruises upon what they have done to make travel through South America attractive. This little circular is not only interesting, but full of data and information and illustrations which can not fail to convince its readers that they ought to make this remarkable journey. Full details of the cruise of the *Bluecher* can be obtained by addressing the Hamburg-American Line, 41–45 Broadway, New York City.

PROFESSOR SHEPHERD'S HISTORICAL ATLAS.

The director general wishes to congratulate Dr. William R. Shepherd, professor of history at Columbia University, New York City, upon the Historical Atlas recently prepared by him for the American historical series and published by Henry Holt & Co. It contains a series of maps, including one of South America, which must be invaluable to the student of historical development as portrayed in its geographical phases. Prof. Shepherd is recognized as one of the leading authorities on everything pertaining to Latin America, having been a delegate of the United States to the last Pan American Scientific Conference, and secretary of the United States delegation to the Fourth Pan American Conference of American States.

REPORT OF MR. A. H. BALDWIN.

There has recently appeared the annual report of Mr. A. H. Baldwin, the efficient Chief of the Bureau of Manufactures, Department of Commerce and Labor. Mr. Baldwin is to be congratulated upon the work which has been accomplished by his bureau during the past fiscal year. The record of what the bureau has done and is doing is a credit to the Department of Commerce and Labor of the United States and is a splendid example of what can be done for the extension of foreign trade under careful organization.

INTERESTING COMMENT OF THE MONTHLY BULLETIN.

Prof. Walter Williams, the eminent head of the school of journalism of the University of Missouri, has been good enough to send to the Pan American Union a copy of a memorandum descriptive of the BULLETIN, prepared by one of the advanced students in this school of journalism, a part of which is quoted below:

> Its success is due to the proper selection of materials for its contents and its make-up, it must be assumed. In the June number of this BULLETIN one may find reading matters touching almost every subject relating to the commerce and progress of the different Republics that would affect international trade and friendship.

Photograph by Harris-Ewing.

SEÑOR DON JOAQUIN MÉNDEZ,

Minister on special mission from Guatemala to the United States.

This BULLETIN publishes news of general interest and importance to the American Republics, of interest to travelers, of reception of new ministers from South American Republics to the United States, and of men prominent in Pan American affairs. It also has a department for book review, noting all new works written about American social and religious as well as political and commercial life. It also reviews all magazine articles of the month on Latin American affairs.

One of the special features of this BULLETIN is the attention given to every Republic alike. Aside from the general reading matters, each country represented in the union is given a review of its commercial and political activities of the month under separate headings.

Another useful feature in the BULLETIN is a department devoted to the subject matter of the consular reports of the United States. It contains the index of the latest reports published on Pan American trade and general progress.

This BULLETIN enables one to get an inside view of the Pan American affairs of to-day without going through countless numbers of references in the library. It furnishes the information of the present conditions of the South American Republics based on statistics given by the officials of the countries concerned.

AMERICAN PUBLIC HEALTH ASSOCIATION.

Preliminary announcements have been issued calling attention to the Thirty-Ninth Annual Meeting of the American Public Health Association to be held at Habana, Cuba, December 5 to 9, 1911. This organization now has a membership of 800, the United States contributing 654 members, Canada 88, Mexico 51, and Cuba 7, and is achieving splendid results in the development of the science and art of public hygiene, and in the promotion of public hygiene as a distinct profession. The organization also issues a monthly journal in which are published the papers, reports, and transactions of the association, and other information of value to those interested in public health. The meeting this year at Cuba will afford a favorable opportunity for members and friends of the organization to see what has been done to make Habana one of the most salubrious cities in the world. A pamphlet containing the program of the meeting and an interesting circular of information are available for distribution to interested parties by addressing the secretary of the organization, Dr. William C. Woodward, Washington, D. C., or Dr. Frederico Torralbas, Tejadillo, 36, Habana, Cuba, the secretary of the local committee on arrangements for the meeting.

LAUNCHING OF CUBA'S SHIPS, "CUBA" AND "PATRIA" ∴ ∵ ∴

TUESDAY, October 10, 1911, is a date which will always be remembered in the official annals of Cuba, for on that day there were launched at the shipyards of William Cramp & Sons, at Philadelphia, Pa., two ships which will form the nucleus of a new navy planned by that Government. The date chosen, moreover, was a most auspicious one, as it marked the forty-third anniversary of Cuba's first war of independence. A more fitting and appropriate way of celebrating this important event in the history of Cuba could not perhaps have been devised. The vessels that were launched, the cruiser *Cuba* and the training ship *Patria*, will constitute the basis of a coast-defense force which the Cuban Government is determined to make very effective.

Up to the present time the few ships commissioned for service in the navy were unequal to the patrol duties so much needed along the coast of this growing island, and these two guns, therefore, stand as an appropriate expression of Cuba's commendable efforts to create a naval force adequate for the preservation of peace and prosperity. As a further part of this naval policy, there are nine gunboats now under contract at the Newcastle-on-Tyne shipyards of the Armstrong company, while last year there was established at Habana a naval academy where a dozen young officers were assembled for training and instruction.

The launching exercises of the *Cuba* and the *Patria* were made all the more notable by the presence of the daughters of Maj. Gen. José Miguel Gómez, President of the Republic of Cuba, two of whom, Señorita Mariana and Señorita Narcisa, were sponsors for the warships, by a large gathering of distinguished Cuban and United States Government and diplomatic officials, naval and army officers, and others prominent in the social and commercial life of both countries. Prominent among the official representatives and guests of the Cuban Government who were assembled on the launching platform, which was artistically draped and decorated with flags, banners, and ribbons of red, white, and blue, the national colors of Cuba, were the distinguished sponsors, Srta. Mariana Gómez and Srta. Narcisa Gómez; Sr. Lcdo. António Martin Rivero, Minister of Cuba to the United States; Dr. Gonzalo Perez, President of the Senate of Cuba;

Dr. Mariano Rocafort, Consul General of Cuba in New York; Dr. J. J. Luis, Consul of Cuba in Philadelphia, and party; Sr. H. J. Medrano, Chancellor of the Cuban Consulate in Philadelphia; Cesar A. Barranco, Vice Consul of Cuba at Washington; Col. J. Morales Coello, Chief of the Navy, and wife; and Sres. Gabriel Diaz Quibus and Hipólito Amador Hernandez, Commanders in the Cuban Navy.

The two daughters of President Gómez have been making a tour of the world and arrived in Philadelphia with their sisters Sra. Gómez de Coello, wife of the Cuban Naval officer, and Sra. Mencia, wife of a noted physician, in time to participate in this occasion.

SRTA. MARIANA GÓMEZ, YOUNGEST DAUGHTER OF PRESIDENT GÓMEZ, OF CUBA, ABOUT TO CHRISTEN THE "CUBA."

Promptly at 3 o'clock in the afternoon, as the last few beams which held the launching cradle were being sawed away, Srta. Mariana Gómez, the youngest daughter of the President, upon whom had been conferred the pleasure and honor of christening the cruiser *Cuba*, took her place in front of the sturdy bow of the vessel. At an appointed signal the bottle of champagne, neatly entwined in its casing and adorned with the national colors, flew from her hand with a well-directed blow and shivered into atoms as it struck fully and squarely against the port bow plates. At the same time could be heard the words, "*Yo te bautizo con el nombre de Cuba*" (I christen thee Cuba), spoken clearly and distinctly by Srta. Mariana, which conveyed the news that at that moment Cuba's new navy had come into real existence. As the huge hull struck the waters of the historic Delaware there arose from the assembled multitude inspiring cheers and plaudits intermingled with which rang out the enthusiastic college cheers of a special delegation of Cuban students from the University of Pennsylvania.

SRTA. NARCISA GÓMEZ, ANOTHER DAUGHTER OF PRESIDENT GÓMEZ, THE SPONSOR FOR THE "PATRIA."

Shortly after the launching of the *Cuba*, Commander J. Morales Coello, senior officer of the Cuban Navy, received the following cablegram (translated from the Spanish) from President Gómez:

I am with you in spirit to the toast of prosperity to Cuba and the United States.

This was received with another outburst from the enthusiastic crowd.

While the *Cuba* was being taken into tow by tugs the party moved to the platform erected at the head of the launching ways on which the training ship *Patria* rested, and Srta. Narcisa Gómez now came forward to execute her pleasant mission as sponsor for the ships. It was exactly 3.20 when the *Patria* received her name from the lips of

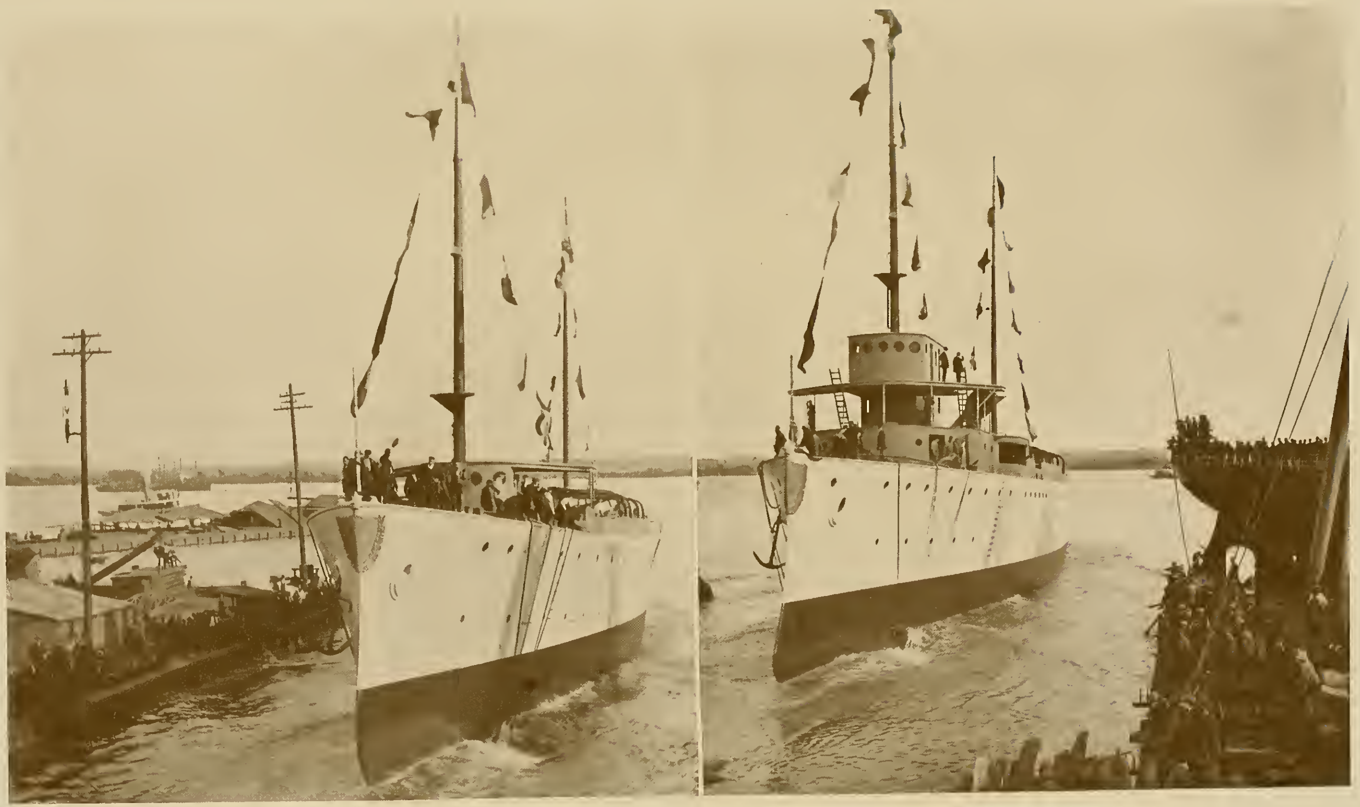
Srta. Narcisa and gracefully slid down the ways while the enthusiasm of the guests again found its expression in cheers and applause.

The contract for the vessels was awarded to The William Cramp & Sons Ship & Engine Building Co. early in 1910, the specifications calling for the completion of these two boats within 18 months. The keels of the vessels were laid in April of last year. The twin screw *Cuba* will be used chiefly to represent the Republic among foreign nations. She is 260 feet long, of 39-foot beam, of 26 feet depth, and has a draft of 13 feet. Her displacement is 2,055 tons, and her contract speed calls for 18 knots. Her armament is adequate and of the most modern type.

DISTINGUISHED REPRESENTATIVES OF THE REPUBLIC OF CUBA AT THE LAUNCHING EXERCISES.

Standing in the center is Sr. Lcdo. Antonio Martin Rivero, Cuban minister to the United States. On his left is Dr. Gonzalo Perez, President of the Cuban Senate, and on his right is Dr. J. J. Luis, consul general of Cuba in Philadelphia, Pa.

The training ship *Patria*, on which the island's future navy will receive its first instruction, is also most modern in its equipment and adequate as to its armament. Her length is 185 feet, she has a 34-foot beam, a depth of 22 feet 6 inches, and a draft of 12 feet.



THE PATRIA. THE CUBA.

THE NEW ADDITIONS TO THE CUBAN NAVY, LAUNCHED ON TUESDAY, OCTOBER 10, 1911, AT THE YARDS OF WM. CRAMP & SONS' SHIP & ENGINE BUILDING CO., PHILADELPHIA, PA.

The Cuba is a twin-screw protected cruiser, adequately equipped and armed with latest modern appliances, and constructed at a cost of about $510,000. The Patria is a twin-screw gunboat which will be used as a training ship and completely rigged as a sailing vessel. She will cost $238,000 complete.

Her displacement is 1,200 tons, and the contract calls for a speed of 16 knots per hour.

Previous to the launching exercises a most enjoyable breakfast was tendered by the president and officials of the Cramp Shipbuilding Co. at the Bellevue-Stratford. Here the cordial official and commercial relationship existing between the United States and Cuba found its truest expression in the many toasts that were offered in the course of the event. President Cramp courteously proposed a toast to the President of Cuba and the Cuban nation; this was responded to by the Cuban minister to the United States, Sr. Licdo. Antonio Martin Rivero, who proposed the continued health and prosperity of the President of the United States and the people of this country. Felicitations and good wishes were also extended in the form of toasts to Srtas. Mariana and Narcisa, the sponsors of the ships, and to many other of the distinguished guests present.

Among those who accepted the invitation to attend the breakfast in honor of this notable occasion were the sponsors for the ships; Sr. Lcdo. Antonio Martin Rivero, Cuban minister to the United States, and family; Sr. Don José F. Godoy, Cuban minister to Mexico, wife, and party; Hon. Thomas C. Dawson, United States resident diplomatic officer; Commander Vassilieff, Imperial Russian Navy, naval attaché of the Russian embassy at Washington, and wife; Dr. Gonzalo Perez, president of the Cuban Senate; Hon. Henry L. Janes, assistant chief, Division of Latin American Affairs, Department of State of the United States; Dr. Mariano Rocafort, consul general of Cuba in New York, and family; Dr. Jacinto J. Luis, Cuban consul at Philadelphia, and daughters; Sr. H. J. Medrano, chancellor of the Cuban consulate in Philadelphia; Sr. César A. Barranco, vice consul of Cuba at Washington; Dr. Juan B. Ruiz, Cuban consulate at Philadelphia; Col. J. Morales Coello, chief of the Navy of Cuba, and wife; Commanders of the Cuban Navy Srs. Gabriel Diaz Quibus and Hipolito Amador Hernandez; Admiral Edwin C. Pendleton, United States Navy, and wife; Rear Admiral W. L. Capps, United States Navy; Lieut. Commander Henry C. Mustin, United States Navy, and wife; Col. George Barnett and wife; Capt. Robert Crawford, United States Navy, and wife; Capt. A. W. Grant, United States Navy, and wife; Capt. W. L. Howard, United States Navy, and wife; Capt. Frank W. Kellogg, United States Navy; Naval Constructor Elliot Snow, United States Navy, and wife; Dr. Ohnesborg, United States Navy; Hon. J. F. Hasskarl, director of the department of wharves, docks, and ferries, Philadelphia; Mr. and Mrs. C. D. Cramp; Mr. Charles H. Cramp; Mr. F. L. Cramp; Mr. and Mrs. George W. Andrew, of the New York Shipbuilding Co.; Mr. E. G. Grace, Bethlehem Steel Co.; Dr. Leo S. Rowe, University of Pennsylvania; Dr. W. P. Wilson, Commercial Museum of Philadelphia, and many other prominent Cubans and Americans of Philadelphia and other cities.

GROUND BREAKING CEREMONIES OF THE PANAMA PACIFIC EXPOSITION

CALIFORNIA implies at once a place of sunshine, of beauty, of gaiety, romance, life, and energy. What the word and name actually mean, from a dry and forgotten source in etymology, is of small concern to-day. Fanciful philology has tried its hand at derivation, and has devised from Greek and Latin, or from false combinations of either with Spanish, a word that might mean beautiful woman, moonshine, fertile land, new country, hot country, or high hill. No use of the word as applied to our west coast region is known before 1535, but Edward Everet Hale has found a California mentioned in an old romance of 1519; this was a land of nowhere, very pleasantly laid "on the right hand of the Indies, near the Terrestrial Paradise," and Cortes or his followers seized the name as appropriate enough for the area just discovered on the extreme west and north of Mexico. What it meant, nobody knew or cared.

In the beginning the early explorers spoke of the country as the Californias. There were two, Baja and Alta, Lower and Upper, both mysterious and unvisited. Cortes landed on the peninsula, Lower California, in 1535, and tried to establish a colony there at Santa Cruz, supposedly an island but probably identical with the present La Paz. Ulloa sailed to the head of the gulf in 1539, and possibly caught a glimpse of the mountains beyond, in the true mainland. In 1540 the Colorado River was crossed. but no European had actually trod the soil of the promised land with firmness sufficient to leave a record behind him, when coming from the east and south. Yet California became recognized on the maps of those times as a pleasant country, although the hardy seamen and navigators of the Pacific deserve the credit of placing it there.

Six expeditions before 1769 were made by water into the unknown regions north of the peninsula of Baja California; that of Rodriguez Cabrillo in 1542–43, that of Francis Drake in 1579, that of Francisco de Gali in 1584, that of Sebastian Rodriguez de Cermeñon in 1595, that of Sebastian Vizcaino in 1602–3, and that of Gemelli Carreri in 1696. Cabrillo died on the voyage, but his pilot went perhaps as far north as the present northern boundary of California, and left some valuable records behind him. Drake (later Sir Francis) came around Cape Horn in 1578, planning the capture of Spanish treasure, the discovery of the mysterious strait across America, or missing that, a voyage around the world. He pushed at least as far north as the present San Francisco, and may have passed within the Golden Gate; the voyage, however, left no settlement, and his greatest act was to take possession of the land as New Albion, in the name of England. Curiously, San Francisco has by some been supposed to have been so named from S. Francisco (Drak), but the theory has no real foundation; if Drake actually saw the Bay of San Francisco, he was silent about it, and he seems best identified with the old Drake Bay, where there has been also an old San Francisco, several miles to the northwest.

PRESIDENT WILLIAM HOWARD TAFT.

Spanish vessels coming to Mexico from the Philippines usually sailed no farther north than the line of 30°, although they occasionally went higher, but they seldom sighted the coast of upper California. In 1584, however, Francisco Gali, commanding one of these ships, struck the California land above that parallel and noted its character, but he said nothing to add particular value to the knowledge of the time. Cermeñon, on the other hand, coming home from the Philippines in 1595, was ordered to explore toward the north and did actually reach what was later called Point Reyes, in a port near which, and named by him San Francisco, he had a disaster, yet it is very improbable that this was the real San Francisco of to-day. Viscaino, in 1602–3, exploring under orders with a view to bettering the Philippine route, marked the harbor of Monterey and described the coast up to the Oregon line, but missed San Francisco Bay. Carreri came down the coast in 1696, but accomplished nothing new. San Francisco Bay remained, therefore, undiscovered from the side of the sea.

From the side of the land, the northern mystery—that alluring story of the marvelous "seven cities" and of the northwest passage—had been more practically investigated. The productive work of Coronado in 1540 was accomplished, and the Colorado River had been explored far into the interior. The problem from the land side was more vital, as it meant possession and settlement, while from the water it meant at that time more directly a mere harbor refuge between Acapulco and the Far East. Although the piercing of the Isthmus of Panama had been proposed by dreamers even thus early, the trip up the west coast from Europe did not then stir the ambition of those whose chief desire was wealth and the conquest of new kingdoms.

Then came the epoch-making march of Portolá. He it was who actually discovered the magnificence of San Francisco Bay and recognized its immense value to future generations, and from his adventurous journey over the mountains and along the coast resulted the settlement of the wonderful country known to-day as California.

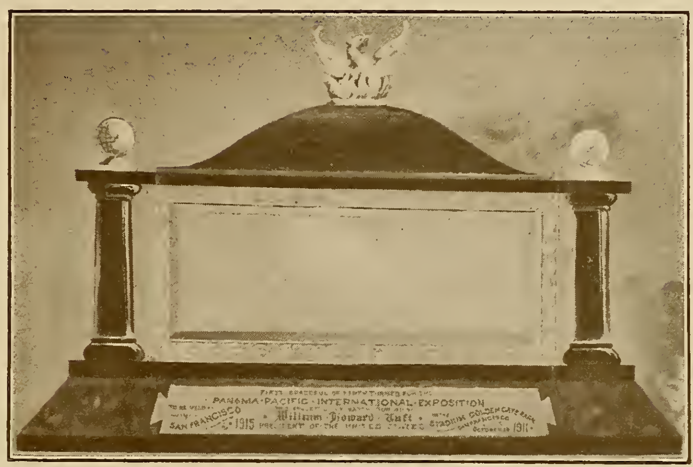
Portolá left Velicata (about 200 miles south of the present international boundary line) in Lower California May 15, 1769, and came within sight of San Francisco Bay toward the end of October. Then the real San Francisco was discovered, and from that date the traditions concerning this portion of California gradually merge into well-established facts. Explorations were continued, missions were founded, and that of San Francisco was formally dedicated on September 17, 1776.

It can thus be seen how close a relationship the present city of San Francisco bears to the inspiring past of the occupation of Latin America on the Pacific slope, and why these ties warrant a public international recognition in addition to the Portolá festival of October 19–23, 1909, the one hundred and fortieth anniversary of the discovery. The word Panama is another essential part of the exposition to be held in 1915, and the reason for its insertion is another romance in itself. California and the Isthmus of Panama are terms almost inseparable in American history and development.

Until the acquisition of upper California by the United States, in 1848, San Francisco grew, as did many towns west of the Rocky Mountains, slowly and quietly. Then came the discovery of gold in California, and the mode of travel by "prairie schooner" from the Mississippi and Missouri Rivers was all too sluggish to satisfy the excited emigrants into the neighborhood of the Golden West. The rush for California, now diverted to the Isthmus, as being quicker, safer, and

PRESIDENT TAFT DELIVERING HIS ADDRESS, OCTOBER 14, 1911, AT THE GROUND-BREAKING CEREMONY TO OPEN THE WORK OF THE PANAMA-PACIFIC INTERNATIONAL EXPOSITION, TO BE HELD AT SAN FRANCISCO IN 1915.

less distressing, began as early as 1849; the Isthmus of Panama was crossed via the Chagres River as far as Gorgona, and thence by mule or on foot to Panama. The need of a railway, not as a mere commercial proposition to facilitate crossing the Isthmus, but primarily to take care of travel from the Atlantic to the Pacific, from the East to San Francisco, became more and more pressing. Actual work on it was begun in May, 1850; it was hurried forward against the almost insurmountable obstacles of a tropical jungle, as the demand for rapid transportation became overwhelming, and on January 27, 1855, the last rail was laid at the summit, known as Culebra. The eager crowds bound for the Pacific slope could now be satisfied, and the flow of trade from one ocean to the other had secured a practical channel.



THE CASKET FOR THE FIRST SPADEFUL OF EARTH.

The casket is a handsome, substantial receptacle into which President Taft turned the first spadeful of earth which marked the beginning of work on the Panama-Pacific Exposition. It measures 16 inches in length, 12 inches in width, and 10½ inches in depth. When the lid was once closed it can not be again opened, as the casket is to be permanently preserved as a memento of the event.

No one questions that the Panama Railway would have been built, some day, without the incentive of gold in California, but no one can deny that it was the demand of the lusty giant San Francisco which accelerated it, perhaps a full generation. No one need assert that the canal would have been built anyhow, had California never become so prominent; of course the canal was bound to come, because man's restlessness compels him to conquer nature. But the extraordinary development of the Pacific coast of North America, the equally extraordinary development of the Pacific coast of South America, and the mathematical demonstration of the increase of transportation facilities which a transisthmian canal would offer, were startling factors in the world's demand for this waterway, and the most essential, indeed the deciding element in hastening the work, was the importance of California.

The value of a transcontinental route by railway from the Missouri River across the Rocky Mountains to the Pacific coast, was advanced as early as 1848 in the United States Congress, but actual rail connection between the two oceans was not completed until May 10, 1869. For nearly 15 years, therefore, California in general and San Francisco in particular, as being the objective point of west coast travel, were most intimately connected with Panama through the Pacific. Since the completion of the many existing transcontinental roads travel has been more commonly overland, but the Panama route has never been abandoned, and the coming of the Panama Canal recalls with vividness the long established relationship between Panama and San Francisco, between California and Latin America.

The Panama Pacific International Exposition is planned to be the natural demonstration of this relationship. The name is appropriate, and its aim is correspondingly high. The purpose is to commemorate the growth of the Pacific coast, the friendship of long standing between California and the regions to the south, and to celebrate, as the beginning of a new era of friendship and commerce, the opening of the Panama Canal to the world, which is to take place in 1915.

San Francisco has been selected as the place in which to hold the world's fair that will mark the celebration, and several hundred acres within the city itself have been given over to it. These lie along the ocean front and embrace, in view of the Golden Gate, the historical spots which have been marked since the soldiers of Portolá's little army first set foot upon them. The prominent subdivisions of the entire exhibition are thus designated: Harbor View, in which, from Van Ness Avenue, will be the main entrance, and with its more than 250 acres will contain the heavy exhibits and the manufacturers' building; The Presidio, where the United States Government will have its exhibits; Lincoln Park, devoted to scenic features, and to have a giant commemorative statue at the summit, commanding the entrance to the harbor; the 200 acres along the shore between Lincoln Park and Golden Gate Park to be given to foreign, State, and other buildings; Golden Gate Park itself, where only permanent structures will be erected, such as the museum, art gallery, and a stadium designed to be the largest in the world. But Telegraph Hill will be improved by a large wireless station and adorned with terraces, while the ferry at the foot of Market Street, together with other well-known highways of the city, will be benefited by permanent and artistic improvements.

The plans for such a magnificent scheme have been carefully thought out. The details have been placed in the hands of worthy artists and architects, and the preliminary studies have been settled for some time. The first step, therefore, was the formal beginning of the physical work, the material preparation for what must be a completed whole by the beginning of 1915.

The great event of the turning of the first spadeful of earth for the Panama-Pacific International Exposition took place in San Francisco, October 14, 1911, and the President of the United States performed that ceremony. All California was interested in the movement and San Francisco was full of the holiday spirit for the occasion. The actual turning of the earth took place at the foot of a hill in Golden Gate Park in front of the Stadium, which was already built and from which the President had just made his address to the assembled multitude.

More than 100,000 persons massed before the structure, and President Taft was greeted by them with an enthusiasm such as only the people of the West can show. Before 8 o'clock in the morning the crowds had begun to gather, and they stood in an ever-growing pack through the three hours before the President arrived. On one side, above the stand erected for the officials, the hills were high, but on the opposite side the grade was slight, and before the President was the white foam of the Pacific's surf. The palm-fringed roads of the Golden Gate Park encircled the Stadium and with a truly California sun brightening the morning the scene was one to be retained as a picture of American activity for many a year to come.

CHARLES C. MOORE.
President of the Panama-Pacific International Exposition Co.

The official program in San Francisco for Saturday, October 14, 1911, was formally opened by the starting of the parade at 10 a. m., which escorted President Taft from the junction of Van Ness and Golden Gate Avenues through many streets and avenues of the city and through the exposition grounds to the Stadium in Golden Gate Park. There were police, troops from the United States Army, seamen from the United States Navy, and bodies of men from the National Guard and the Naval Militia of California. People crowded every window along the line of march, the streets and sidewalks were packed with onlookers, and every kind of noise from cheering or handclapping to horns and mechanical alarms was invoked to demonstrate the people's welcome.

A TYPICAL PICTURE OF THE CROWD.

San Francisco was filled on October 14, 1911, with a multitude of people gathered in the city to celebrate the ground-breaking ceremony for the Panama-Pacific International Exposition, to be held in 1915. At least 100,000 persons attended the exercises in Golden Gate Park when President Taft spoke on the occasion.

On entering the park President Taft paused long enough to review the troops. As he appeared at the stadium four bands struck up Hail to the Chief, and the people made a mighty chorus of the words. Mme. Nordica, who sang at the ground-breaking exercises and who also received an ovation as she appeared on the stand, then delighted them with a simple rendering of the Star Spangled Banner, in which all most loyally joined. When quiet was restored, Mr. Charles C. Moore, president of the exposition company, made the opening address. He was followed by P. H. McCarthy, mayor of San Francisco, who spoke of the good work the city had done in rehabilitating herself from the recent disaster, and of the proof that action gave to the world that nothing would be spared to keep the promises made for the future. Then Hiram W. Johnson, governor of California, welcomed the people. and especially the President, to the State, and on concluding yielded place to Mr. Taft, President of the United States.

> It is most satisfactory—

Said the President—

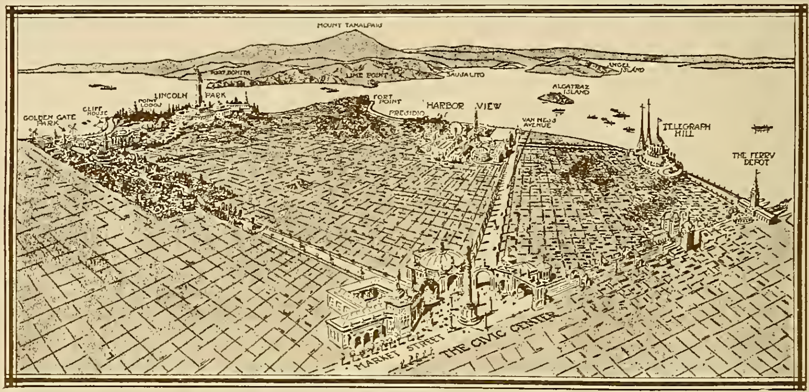
> it is most appropriate, that to the city of San Francisco has fallen the pleasant duty and the gratifying task of commemorating the completion of the canal. More than any part of the world, the west coast of America is interested in this great avenue of commerce. There is no city with the power of entertainment, no city that has shown itself equal in energy and pride of community, to compare with San Francisco, and therefore, when she and the State of California are willing to commemorate the event, well may the people of the United States acquiesce in their willingness to accept the task.

He had already reviewed the early history of Panama and the Pacific, and of the various attempts to build the canal; he gave great praise to engineers, both French and American, and he lauded with most hearty phrases the epoch-making accomplishments of the sanitary corps which had conquered disease and made the undertaking, in that respect as well as in others, one of the wonders of the world. He described the actual condition of the canal at the moment he spoke, and prophesied that the waterway would be practically opened by July 1, 1913. Then, after the words of sincere encouragement just quoted, the President gave a few details of the actual workings of the canal when finished, in both engineering and commercial aspects, and finished by saying:

> I congratulate San Francisco, I congratulate California upon their energy, their enterprise, their patriotism, and their generosity in seizing this opportunity to commemorate such a great event in the world's history, which reflects so much credit on the generosity and the world spirit of our American Republic.

When the President finished speaking, the golden spade with which he was to turn the earth was handed him. He walked down the platform to the hillside, and with his face wreathed in smiles set his foot upon the spade. It sank into the ground, he lifted the shovelful of earth before the crowd, and, while the cheering broke out with renewed vigor, the earth was finally laid in a case of silver and gold. A soldier handed the President the halyards of the exposition flag, and it was then for the first time unfurled to the breeze as the official emblem of the exposition. A miniature flag similar to the one used at that moment was later given to President Taft by the directors, at the luncheon prepared by them in his honor, immediately after the conclusion of the ceremonies.

Then the Star Spangled Banner was struck up by the bands, Mme. Nordica stepped forward and led the crowd in singing, and cannons on the hillside crashed out a salute of 21 guns, while the battleships in the harbor boomed an answering salute. A flock of 200 white pigeons, another of 100 carrier pigeons, were now released from baskets; they circled into the air and gradually disappeared on their emblematic mission of peace. From back of the hills, over the platform, Chinese fireworks were sent up, with strange oriental designs; strings of firecrackers were let off, and the enthusiastic cheers of the multitude seemed to grow stronger with each new manifestation of the popular celebration.



BIRD'S-EYE VIEW OF THE SITE OF THE PANAMA-PACIFIC INTERNATIONAL EXPOSITION FOR 1915, AT SAN FRANCISCO.

The selected ground begins with Telegraph Hill on San Francisco Bay. The ferry at the foot of Market Street is to be made the entrance to the exposition city; this street and Van Ness Avenue are to be beautified with permanent improvements. Harbor View fronts completely on the water between the Golden Gate and the bay. Lincoln Park overlooks both ocean and city. Golden Gate Park lies along the Pacific Ocean and is to contain the permanent structures, preserved as memorials of the exposition. In Golden Gate Park the first spadeful of earth on the work was removed, October 14, 1911, by President Taft.

These exercises were finished at 1 o'clock, but the afternoon also was given over to the festivities. The President was escorted back to the center of the city by the exposition officials and the thousands who had come to the park with them; hundreds of automobiles formed a regular procession along the streets and avenues, so that long after the formal program had been completed the rejoicing by the people was continued.

In the evening a banquet was given to President Taft, during which he spoke on the subject of "Peace." Among other toasts were "California," given by Dr. Benjamin Ide Wheeler; "San Francisco," by Hon. W. B. Bourn; "The judiciary," by Judge W. W. Morrow; and the opening remarks were made by the toastmaster, Charles C. Moore, president of the exposition. Mr. Moore said:

> This will be the first international exposition ever held west of the Rocky Mountains. We have assumed our responsibility with a determination to make good in the full degree, and we are looking forward to the world's favorable verdict in 1915.

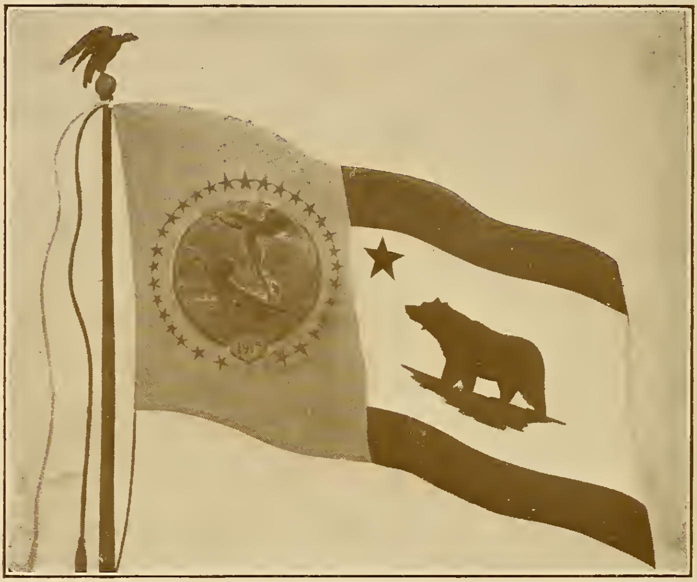
> The civilization we inherit—

Said Dr. Wheeler—

> in which we are shapen and made to be what we are, had its origin in the valleys of the Euphrates and the Nile and on the hillsides of Syria and Greece. With its back turned toward the old Orient of India and China, it pushed its way westward around the globe. It passed from Greece to Rome, to Spain and France and Germany, to England, and to America across the seas. The opening of the canal means that it has entered the Pacific; and this is the arena in which the two world halves, the Orient and the Occident, are to stand, no longer back to back, but face to face, and no man can foresee the issue thereof. But every man who sees and thinks can know that with the opening of the canal the history of the human races passes to its last and final phase. Such an event must be celebrated at a place where it has significance, where the races meet, where the arena, be it mart or battlefield, is prepared and fixed, where the look is straight out westward—not averted or askance, but straight out westward, toward the duty which awaits this nation.

Thus was celebrated the first, the opening day, of the Panama-Pacific International Exposition. With gaiety, joy, and hope in everything; under cloudless skies, and with a people full of the fresh enthusiasm of youth. But at the same time their spirit, while not dampened, was tempered by the knowledge of the great responsibility they—California and San Francisco—had assumed. With the element of fun, good nature, and festivity there was quite noticeable a proper proportion of seriousness and forethought. The people celebrated and rejoiced, not alone on account of the good time they were having, but also because of the inspiration that they were determined to fulfil the promises they have given the nation and the whole world. It is to be a great exposition; it must be the greatest exposition ever held in this or any other country; it must celebrate not alone the achievements of the past and the accomplishments of the present, but it must represent the limitless future, in which the Pacific Ocean, now for the first time made directly accessible to the East, marks the end of civilization's advance into the western unknown.

To give a list of all those who played an active part in the "ceremony of ground breaking" would be exhaustive. Many public officials of the Pacific slope and of the neighboring States would be on this list; many prominent persons from all ranks would have to be mentioned; in fact, the entire population of San Francisco would deserve notice and praise for their share in the proceedings of the day. But too great credit can not be ascribed to the committees having the day's celebration in charge. They were made up from the board of directors of the Panama-Pacific International Exposition, and are as follows: Charles C. Moore, president; Rudolph J. Taussig, secretary; John Barneson, John A. Britton, Frank L. Brown, M. J. Brandenstein, William H. Crocker, R. A. Crothers, P. T. Clay, Andrew M. Davis, Charles de Young, Alfred I. Esberg, M. H. de Young, Charles S. Fee, H. F. Fortman, A. W. Foster, R. B. Hale, I. W. Hellman, jr., S. Fred Hogue, C. W. Hornick, Homer S. King, Curtis H. Lindley, P. H. McCarthy, James McNab, Thornwell Mullally, Charles S. Stanton, James Rolph, jr., A. W. Scott, jr., Henry T. Scott, and Leon Sloss.



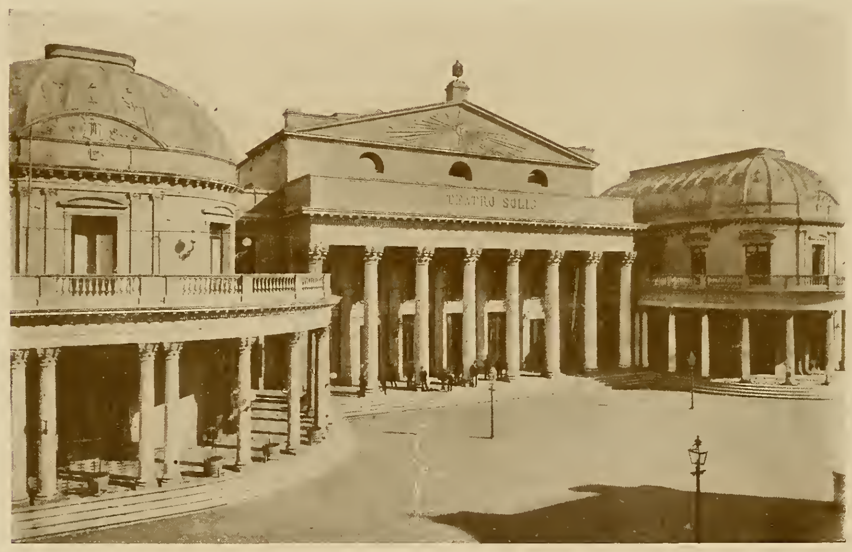
THE EXPOSITION FLAG.

When the first spadeful of earth was removed by President Taft, the exposition flag was run up to the masthead and the official work had begun. A replica was given to the President as a souvenir. The flag was especially designed for the exposition. It embodies the following colors: The red, white, and blue of the United States, the blue and gold of the State University of California, the bear flag "The California Republic," the red star representing the State, an emblem of the exposition, and the 30 gold stars representing the 30 States preceding California into the Union.

The ground breaking on October 14, 1911, in San Francisco, was but the beginning of the great exposition to be held in that city during 1915. Then also will be opened for general use the Panama Canal, which has been 400 years in the building. To pass through on a vessel which will then leave the Atlantic and after a short 50 miles enter the Pacific, with a saving of almost 10,000 miles of open water, will in itself be a miracle of human industry; but to have at the same time the pleasure of attending the exposition in San Francisco, prepared to celebrate that event, will be an object lesson in ambitious accomplishment, and perhaps the only one by which the future can be gauged.

THE INDEPENDENCE DAY OF URUGUAY

THE Oriental Republic of Uruguay has set aside as the national holiday the 25th of August, for on that day, in 1825, final independence was declared and the people then determined to become an individual nation among the sister Republics of Latin America. While they took enthusiastic part in the centenary of the independence of Argentina in 1910, and gladly recognize now that the initiative impulse for the liberty of the Rio de la Plata was begun 100 years ago, yet their own nationalism began later, and their own development dates from 1825.



SOLIS THEATER, MONTEVIDEO, URUGUAY.

This large and handsome theater, a national institution, covers almost 2 acres, and will seat 3,000 persons. A distinguished English traveler has said that he had seen few interiors in Europe which could rival or surpass it. During the recent celebration of their national holiday an opera, by a native composer and based on a native theme, was presented for the first time at the Solis Theater.

The great hero of Uruguay is Artigas, through whose persistence in struggling for his country the victory was finally won. The Republic was born with Artigas; he led them from the beginning and lived to see their final triumph. The complications of their political relations really intensified their nationalism, and they look back to Artigas as the man who gave inspiration to their desires.

Uruguay will, therefore, observe August 25, 1925, as the centennial anniversary day of their independence, but every year on that date a celebration is held throughout the country, as the essential national holiday. This year the event passed with its full share of popular enthusiasm. The festival opened with a general reception to the people by the President of the Republic, Sr. Batlle y Ordoñez, from 10 to 12 in the morning, at the Casa de Gobierno (Government Palace), during which he was attended by numerous officials, many civic and patriotic bodies, as well as individuals, paying their respects to the head of the nation. In the afternoon the President and Sra. Batlle y Ordoñez held a second reception at their private residence, which was more of the nature of a social affair, made brilliant by the presence of the diplomatic corps, of army and navy officials, and of the officers of the visiting Brazilian and Argentine men of war. Then there was a military parade along the famous Avenida 18 de Julio, but including also several other streets and the great Plaza Independencia, which is so dear to the hearts of the citizens of Montevideo.

TRIUMPHAL ARCH IN THE PLAZA CAGANCHA.

During the recent celebration of the Uruguayan national holiday, August 25, 1911, the electric light for night illumination was employed in many ways. Streets and squares were ablaze, and the decorations were artistically designed.

The celebration in other ways, also, was most carefully planned and executed. The central streets were beautifully decorated, the illuminations being the most effective that have ever been attempted in the capital. One of the features was an enormous triumphal arch in the Plaza Cagancha; it was 27 meters (88½ feet) high, and carried 8,000 electric lamps, while at its base was an electric sun of 2,500 lamps. On the tower of one of the highest buildings was what was said to be the second largest and most powerful searchlight in the world, of 90,000,000 candle-power, which was visible for many miles both at sea and on land. The Plaza Independencia was a veritable fairyland of light and color; the Plaza Constitución was converted into an artificial flower garden, in the center of which a luminous fountain danced to a height of fully 9 meters (30 feet). For those who did not care to spend their evening out of doors watching the illuminations, listening to the music in the parks and squares, or amusing themselves in social ways, the Government had arranged for the distribution of free seats in the theaters and many of the biograph parlors; probably more than 32,000 tickets for these performances were given away, and although not all the applicants could be accommodated, of course, yet this act of generosity helped much in the day's entertainment.

On the night of the celebration, for the first time in the history of Montevideo, it is believed, two grand opera companies gave performances in the city on the same date. In the Solis Theater the special feature was the premier presentation of a national opera "Morgana," on an Uruguayan theme and written by a native musician, Dr. Rafael De Miero, the orchestra being conducted by Mascagni, who was in Montevideo for the occasion. At the Urquiza Theater the "Barber of Seville" was given. Brilliant audiences filled both theaters.

THE STREET CALLED THE "18 OF JULY" DURING THE NATIONAL HOLIDAY IN MONTEVIDEO.

This broad avenue, practically in the center of the capital of Montevideo, is a popular thoroughfare, with fine shops and buildings. On the night of August 24, just before the national holiday, August 25, 1911, it was decorated most attractively and was used by the people as a promenade during the entire evening. The electric-light display was magnificent.

An attractive feature of the celebration was the attendance, as officially representing their Governments, of the Argentine cruiser *Buenos Aires* and the Brazilian cruiser *Rio Grande do Sul.* Their officers took part in all the functions of the day and added to the pleasures of the social gatherings of the evening. The vessels were also illuminated, and they thus contributed to the brilliance of the scene in the harbor.

But apart from such formal recognition of the event, the people of Montevideo most throughly enjoyed themselves on their national holiday, as is their nature and custom. Those who could not attend the theaters were entertained by the parades and illuminations in the streets; by day they had athletics, sports, and races, and other means of pastime, while at night there was a continuous procession of the crowd in the brilliantly lighted avenues and squares; and, as is almost without exception the rule not alone in Montevideo but in other Latin American capitals, the people were orderly, good-natured, and polite. What amusement they made for themselves they carried off without disturbance or mischief. Not one accident was reported; and the police, although kept busy, had no troubles to exhaust them at the end of the day.

THE PARADE OF TROOPS PAST THE NATIONAL GOVERNMENT BUILDING IN MONTEVIDEO.

The entire day of August 25, 1911, was given to public ceremonies of one kind and another. The President of the Republic held receptions, and, assisted by various officials, he reviewed the Government troops. This year the march along the principal streets and across the main squares was most imposing.

In other parts of the Republic and, indeed, in many foreign capitals, the national holiday was similarly recognized. In Buenos Aires, Rio de Janeiro, and Santiago banquets were held and proper respects paid by the diplomatic and consular representatives resident to the flag of Uruguay, and the Uruguayan colonies in several European cities celebrated the event by banquets and social gatherings.

COLUMBUS DAY IN THE AMERICAS

THE celebration of October 12 as Columbus Day is becoming a movement of importance. There are increasing hopes that the goal of a Pan American day—an international festival in which the entire Western Hemisphere will join in commemoration of the discovery of America—is every year closer to realization.

Discovery Day, the anniversary of October 12, 1492, it has been called, and it would be difficult to select a more appropriate name. No one part of America is more interested than any other. None of the great divisions—North, Central, or South America—has a larger interest than any of the others, although the West Indies would naturally have the more alluring field for local celebrations, because many places could be marked there as having actually been touched by Columbus himself. Yet the influence of the great navigator spreads vitally from Alaska to Cape Horn.

Since the report of last year (BULLETIN, November, 1910, p. 819) 14 more States have declared the 12th of October a legal holiday. The complete list of those in which Discovery Day is officially celebrated is therefore as follows: *Alabama, Arkansas,* California, Colorado, Connecticut, *Delaware, Idaho,* Illinois, *Indiana, Kansas,* Kentucky, *Maine,* Maryland, Massachusetts, Michigan, Missouri, Montana, *Nebraska,* New Jersey, New York, Ohio, *Oklahoma, Oregon,* Pennsylvania, Rhode Island, *Texas, Vermont, Washington,* and *West Virginia.*[1] In Latin America, Brazil, Colombia, Costa Rica, Panama, and Peru observe this date in an official manner.

This year the celebrations in all these States and Republics were carried out with more than usual enthusiasm, and shows that the desire to make October 12 an international holiday, which would in fact be almost unique in purpose, second only to the universal

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The States in italic are those that have legalized the holiday during the year.

recognition and observance of Christmas, is increasing in strength and results.

This year the number of local celebrations increased about in proportion to the number of States establishing the legality of the holiday. In Portland, Oregon, for example, where Columbus Day was celebrated for the first time, the officials of the city took part in the ceremonies and the school children were given a prominent place. In Mobile, Alabama, one of the States which has only just passed an

THE SANTA MARIA.

The caravels in which Columbus sailed—Santa Maria, Niña, and Pinta—were small but typical vessels of the time. Exact reproductions of them were made for the World's Fair in Chicago (1893) at the joint expense of the Governments of Spain and the United States. These are now permanently preserved in the lagoon of Jackson Park, of that city, and were used during the Columbus Day celebration in Chicago. The Santa Maria was 63 feet long over all, 51 feet on the keel, 20 feet beam, and 10½ feet in depth.

act to observe the day, all business ceased, street parades and receptions were organized, and addresses were given on the life and deeds of Columbus. In Chicago, peculiarly well adapted for the celebration on account of the presence there of the replicas of the convent of La Rabida and of the caravels in which Columbus's first voyage was made, elaborate pageants were given on both land and water, while reproductions of the historic scenes of 419 years ago and impersonations of the immortal characters of Columbus, Ferdinand and Isabella, and others of the time were presented. In San Francisco, about to begin the work of preparing the Panama-Pacific International Expotion, a citizens' Columbus Day committee gave an entertainment consisting of patriotic songs, literary exercises, and choruses, with parades through the principal streets, and the school children were particularly instructed on the importance of the occasion. In New York city a glittering line of soldiers, sailors, and civic organizations, 40,000 persons in all, paraded in Manhattan, Brooklyn, and the surrounding towns. The cities of New Jersey also celebrated, and great enthusiasm marked both the native and the Italian participants. In

THE LIGHTHOUSE ON WATLINGS ISLAND.

Watlings Island is accepted as the first landfall of Columbus in America. It lies in latitude 23° 52′ north and longitude 74° 48′ west (Greenwich), and is 180 miles southeast of Nassau. The island is 13 miles long, from 6 to 7 miles wide, and has an area of about 60 square miles, half of which is covered by lagoons. The population is a few over 600 persons. Watlings belongs to Great Britain, as one of the Bahamas.

the District of Columbia two purposes were held in view—one was that of the celebration itself, those interested in the matter desiring to give to the unofficial ceremonies all the elements of a general celebration, while those who had taken a glimpse into the future bent their energies toward getting Congress to make the day a legal holiday for the capital of the Republic, and thus incidentally to set an example for those States and countries not yet arrived at definite action in the matter.

Among those agitating for a universal American holiday are two kinds of organizations deserving especial attention. One is that of the numerous Italian societies, which, because of national pride and because of their love of America, hope to have the great discoverer thus honored; the other is that organization known as the Knights of Columbus, a well-known fraternal society remarkably well ex-

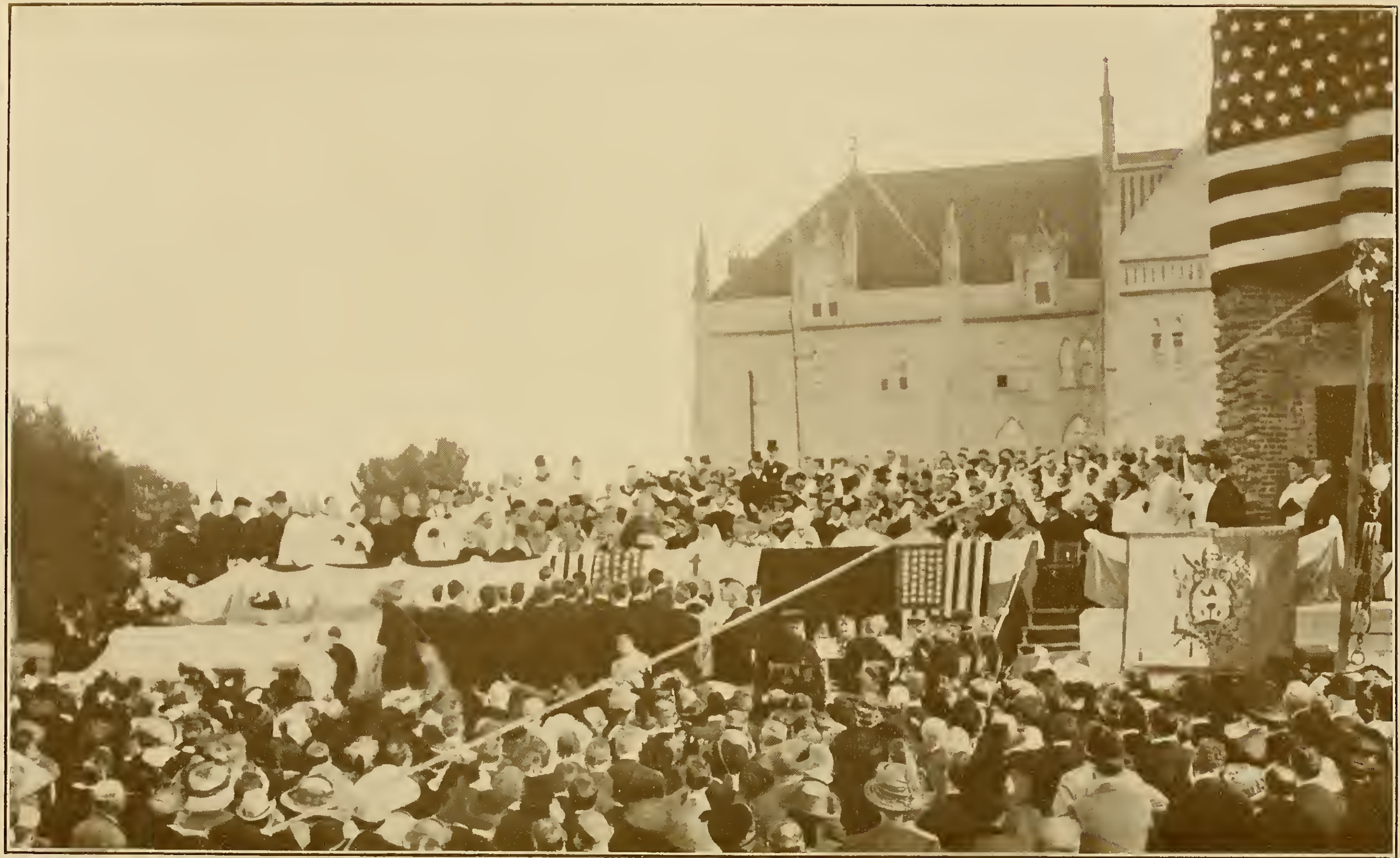
The International News Service.

COLUMBUS DAY PARADE IN NEW YORK.

Federal and State soldiers, sailors from the North Atlantic Squadron, civic organizations, and many Italian societies took part in the Columbus Day parade in New York City and vicinity October 12. The formation began at Washington Square, marched up Fifth Avenue, and was reviewed at Columbus Circle by Mayor Gaynor, after which a beautiful wreath was laid at the base of the statue there. In the evening many festivities were enjoyed by the Italian colonies. The picture shows the parade passing Twenty-third Street.

tended in all parts of the United States, into Canada, Cuba, and the Philippine Islands. This order was founded on the 2d day of February, 1882, and has now about 250,000 members. Its nature is largely fraternal and beneficent, but one of its fundamental purposes is the popularization of the name of Columbus. Already a bill has been introduced before Congress to make the 12th of October a legal holiday in the District, and its ultimate success seems not far off.

When Columbus Day, Discovery Day, is set aside as a legal holiday from one end of America to the other—and all the nations should

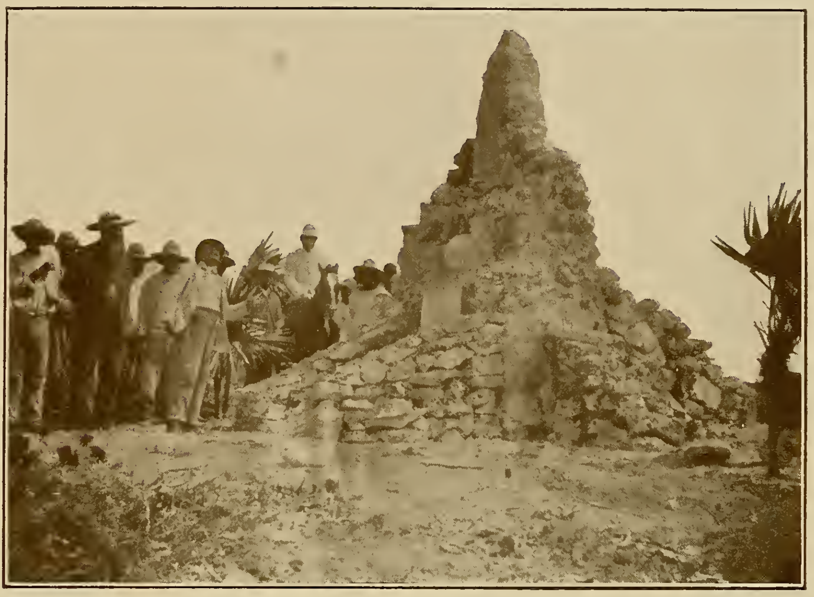


Photograph by Harris-Ewing.

THE COLUMBUS DAY CELEBRATION IN WASHINGTON.

Persistent effort is to be made to have Congress recognize October 12 as Columbus Day, Discoverer's Day, in the District of Columbia, and this action would pave the way to a general celebration in all parts of America. This year (1911) many patriotic societies prepared exercises for the event. Cardinal Gibbons, who is strongly in favor of the movement, made some stirring remarks to support the idea, during his address at the corner-stone laying of Gibbons Memorial Hall, in Washington, where also was celebrated the silver jubilee of his cardinalate.

recognize the merit of celebrating in this way one of the greatest events in history—it will add still another factor of sentiment to our growing internationalism.



THE MONUMENT ON WATLINGS ISLAND.

On an eminence above the bay is a stone shaft marking one of the great events in history. The legend on the tablet is as follows:

On this spot
Christopher Columbus
first set foot on the soil of
the New World.
Erected by the Chicago Herald
June 15, 1891.

THE POTATO, AMERICA'S EDIBLE TUBER[1] ⁂ ⁂

WITH corn and potatoes America has fed the world. The term "corn" is commonly used in the Western Hemisphere to mean "maize," or Indian corn, and not the rather generic expression under which all grains are included, according to English nomenclature. Indian corn has already been discussed in the BULLETIN OF THE PAN AMERICAN UNION (June, 1909), and it was shown that that noble plant has spread over the whole earth, till now it is a stable crop in Africa, in many parts of Europe, and even in Asia, where the original Indians cultivate it without ever knowing or perhaps caring whence it came. If it has not displaced it has at least supplemented rice, that great life-supporting grain, which from time immemorial has been grown in the Far East; but Indian corn is an antipodal product, having come, as history teaches us, from the neighborhood of the Isthmus of Tehuantepec, in North America.

The potato came originally from South America. But here it is necessary to pause a moment and to state that what is really meant by the word potato is the plant and tuber vulgarly called the Irish or white potato, although it has no more relation to the Emerald Isle than that the good people there are very fond of it. The misnamed "sweet" potato has no right whatever to the title. That pleasant vegetable belongs to the morning-glory family, botanically being known as *Ipomœa batatas*, thus again betraying a fictitious relationship to the other family, because the batata is a native term for the real potato as well. Again, it is unjustly suspected that this sweet potato is the vegetable actually brought by Drake and Hawkins into England, where it masqueraded for some years as the genuine South American food of contemporary rumor. It must be understood, however, that the sweet potato is likewise a native of America, but its original home was probably the West Indies and Central America. At any rate it grows in the Tropics and subtropics and finds its climatic limitations at about the temperature and altitude at which the Irish potato begins to thrive. The yam is another appellation of the sweet potato, although that, too, is an error, for the yams—dioscoreæ—belong to a group of climbing plants. A number of varieties are found throughout the Tropics and subtropics, and they are cultivated in both the East and the West Indies. Other roots and tubers may resemble the potato, and the tomato is related to it, but they must not be confounded with the far better known vegetable, which alone is entitled to the name. The commercial and domestic classification

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[1] By Albert Hale, of Pan American Union Staff.

A FIELD OF POTATOES UNDER SCIENTIFIC CULTIVATION.

is stronger, however, than the scientific, and therefore no attempt should be made to separate them in the popular mind.

The common, or white, or Irish potato is undoubtedly American all through. Its prehistoric and aboriginal habitat was the western slopes of the southern continent, from the neighborhood of Quito in Ecuador, or as some claim even from that of Bogota in Colombia, to the central region of Chile.

Botanically, the potato is a solanum, one of the most diversified plants of the vegetable kingdom. Something like 1,000 varieties have been described, but, assuming that several of these are not substantially accurate, there remain at least 800 which are well known. It is remarkable that only about 40 varieties have pinnate leaves and produce tubers on the roots beneath the ground, and that these special varieties are chiefly of American origin. All these tuberous, pinnate-leaved kinds of the solanum are nearly related and very probably have a common origin. This first habitat of the potato has been laid by some students, quite as much for the sake of poetic harmony as for historic exactitude, in Central America near the home of the primitive maize, but in all fairness South America deserves and will hold the honor.

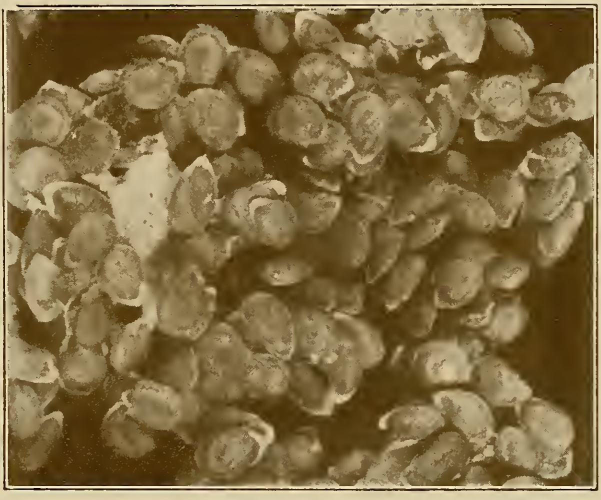
(Courtesy of U. S. Department of Agriculture.)

THE ENTIRE PLANT OF THE POTATO, SHOWING THE ROOT AND TUBER SYSTEMS.

The white, Irish, or common potato is the *Solanum tuberosum,* so called because there develops on the underground stems peculiar tuberous growths, enlarged to an unusual degree by cellular tissue; these are not roots. From these tubers reproduction can take place as readily as from the fruit above ground.

Botanists like to subdivide the plant world into what a simple layman thinks an endless refinement of technicalities. The potato does not escape this scientific systematization by any means. There are at least three groups of solanum, which are techincally differentiated by their blossoms, or, to be more exact, by the calyces and corollae. In one group belongs our common potato, *solanum tuberosum*, and the *Maglia*, which have a five-cornered, wheel-like corolla; in another is that form with a distinct calyx, the real *solanum etuberosum;* in a third, the corolla is star-shaped and includes the *solanum commersonii.*

These details may appear wearisome, but they have a bearing on the popular interest in the potato, because of one curious fact. In South America, where the potato comes from, all pennate-leaved tubers with wheel-shaped corollæ are traceable to the west coast regions along the Andes, from Colombia to Chile, while those with star-shaped corollae are traceable to the east coast regions of the River Plata, from South Brazil to Argentina. The former are edible, the latter are not.



(Courtesy of Technical World Magazine.)

POTATO SEEDS FROM THE BALLS OR FRUIT.

Potato balls were once common in potato patches, and it was by carefully observing their growth and selecting fine specimens when ripe that the distinguished horticulturist, Mr. Luther Burbank, developed the variety which bears his name. To-day, however, potatoes are almost altogether propagated from the tuber, the "eyes" possessing the faculty of reproduction equally with the seeds. Seedless potato plants are a fact; it is feared that if nature, noticing the uselessness of the seed, abandons their development on the potato, the tuber may sometime become extinct.

The edible potato, from which all the European and American variations have been developed, was undoubtedly cultivated by even the inhabitants of the west coast who occupied the land before the arrival of the Incas. When the Spanish conquerers arrived there, they found one great source of food supply in this native vegetable. In Peru, however, it was not a coast product, for the climate there seemed unfavorable, and what happened to grow on the lower levels were small, insignificant, and watery. The best kind of potato grew at an altitude of about 7,000 feet, back of Lima; it was small, round, with a thin skin, and was yellowish inside (*papa amarilla*). In southern Peru, not far from Mollendo, but among the foggy regions (June to September), up among the rocky hills, the potato has been found wild. As a plant it may cover the barren peaks with green; such elevations are called by the natives lomas, and the name has been transferred to the kind of potato that is taken as a crop from them. Another kind of primitive potato found as part of the native diet of the older Peruvians is the chuño, which grows among the mountains. The peculiarity of the chuño is that it has been frozen, for at these altitudes where the temperature sinks below the freezing point, the Indians pour water over their potatoes for the night, and expose them for the day to the sun. Thus they may well claim to be the first to produce a desiccated potato, in this simple manner, too, in advance of all the apparatus which has of late been devised for that purpose.

(Courtesy of Technical World Magazine.)

POTATO GROWING IN THE DARK.

In carefully maintained conditions potatoes will produce quite a family of small tubers. The relationship may be called "mother and daughter." An absolutely dark area is necessary, also light, clean soil or vegetable mold and an entire absence of injurious germs on the skins. Planting is not done, but the mother potato is simply half buried in the soil spread on boards.

Passing further along the coast into Chile, where the climate is quite temperate and consequently is suitable, even near the coast, for such vegetation, there is found that other form of the indigenous potato, the Maglia, which so attracted the attention of Darwin when he made his famous voyage in the *Beagle*. As far south as the Chonos Archipelago (about 45° south) this plant grows wild near the sea. The potatoes from it resemble English potatoes and have the same smell, but do not stand cooking so well. Little effort seems to have been made to develop the original tubers, although they form a good part of the food of the people, yet in this neighborhood the island of Chiloe alone has about 25,000 acres under cultivation, of the 123,000 acres devoted to potatoes in all Chile. That the Europeans found potatoes in Quito and in Bogota need not be denied, but there is no strong reason for supposing that it was more than the same plant already mentioned, transported thither before they came.

Quite another story is uncovered along the east coast of South America. There the potato is considered a European vegetable and is cultivated only by those whose experiences are derived from the Old World. No tradition connects the few remaining natives with a past in which the potato flourished, and in the minor instances in which a "wild potato" has been found, experiment shows that it is inedible and perhaps even poisonous.

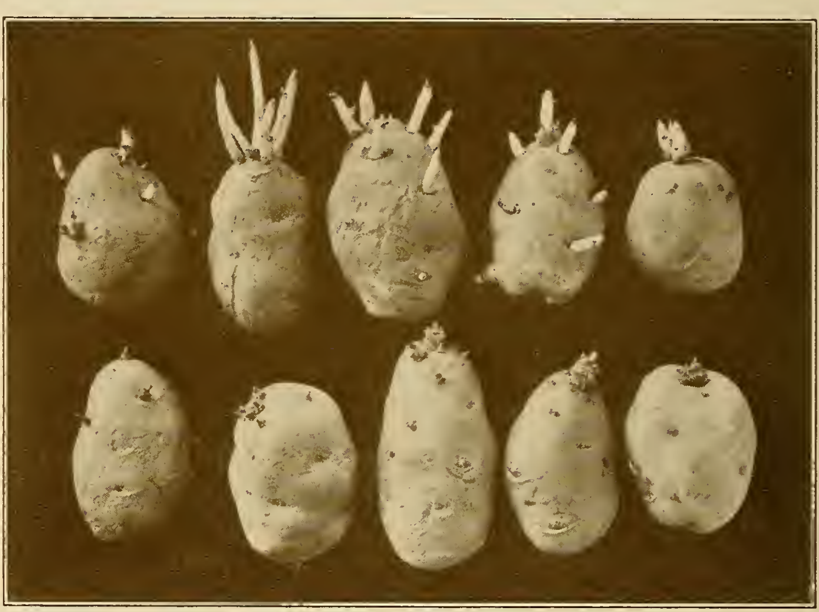
(Courtesy of Technical World Magazine.)

CUTTING OFF SPROUTS.

The "eye" of the potato performs the same service as the seed in the fruit, but it must be treated very delicately; if sprouts spring from these eyes before they are planted, they may be bruised and so injured as to cease to grow. It is wise therefore either to plant potatoes or cuts from them early, or to clip off the sprouts without hurting them.

This is the case in the "wild potato" of Paraguay. Such a plant has for years been known to exist in the basin of the River Parana. It grows on the plains, budding in March and April, and ripening during the winter months of May to August. The tubers are about the size of a walnut and sometimes larger, soft and watery, full of irritating solanin (the active alkaloid of the potato), and of a poor taste. They are not eaten nor are they cultivated; the so-called edible potato is considered an imported vegetable, foreign to native experience and judgment, while the vegetable that takes the place of potato in all native dietary is the "mandioca," which has been prepared as a food from time immemorial by the pre-Columbian inhabitants of the eastern regions of South America from the mouth of the Amazon to that of the Plata.

The food potato of commerce made its way, therefore, from its prehistoric home in the Andes, to North America and via Europe to the eastern shores of South America. How it came to do this is a curious story. Traditions and rumors do not all agree as to whom the honor belongs of having carried the vegetable itself across the Atlantic; it is not improbable that Pizarro presented specimens to his sovereign, as curiosities of American life, alongside the gold and such precious trophies which appealed stronger to their civilized majesties. One good but little-quoted authority says that the first potatoes were taken in 1565 by John Hawkins from Santa Fe (in South America) to Ireland; that shortly afterwards, in 1580, the naturalist Cardanus introduced them to Italy, and actually grew them in 1588. Clusius, the director of the royal gardens in Vienna, in 1588 received two tubers from Phillippe de Sivry of Belgium, who



(Courtesy of U. S. Dept. of Agriculture.)

TUBERS SHOWING THE ARRANGEMENT AND ORDER OF SPROUTING EYES.

It is a matter not yet settled whether the planting of the entire potato or seed pieces (cuttings containing "eyes") is of greater value in results obtained, much depends upon other factors besides mere agricultural returns. But the arrangement and order of the sprouting "eyes" is well illustrated in the photograph, and if sprouts have already appeared, they must be handled very delicately so as not to injure them before planting.

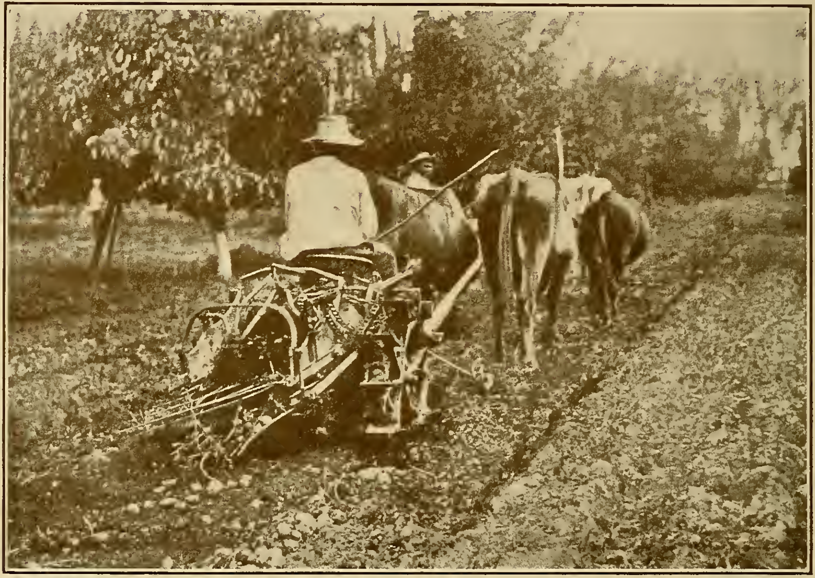
knew the potato under the name of "taratoufli," but these probably came from Italy, after having been grown in Spain.

Great credit belongs also to Sir Francis Drake, who learned of the potato about 1578, either in Peru itself or in some near-by island. He took specimens back with him, stopping first in Virginia, where he helped to plant them in 1585. In 1586 he arrived in England, carrying potatoes among his treasures, and thus the story arose that potatoes came from North America. Closely allied to this error that other, which confused the South American potato with what is now known as the sweet potato, the "batata," samples of which surely came from Virginia somewhat earlier than this time. It is probable that Drake gave potatoes to Raleigh. At any rate, it is an accepted statement that Sir Walter Raleigh was responsible for their use in Ireland, because he gave several to the grandfather of Sir Robert Southwell, who, to check the famine spreading in that island after the disastrous failure of the grain crop, cultivated them at once there and popularized their use to his eternal credit.

HARVESTING POTATOES IN CENTRAL CALIFORNIA.

Early potatoes grown as market-garden or truck crops and intended for immediate consumption are as a rule harvested as soon as they are of marketable size, regardless of the maturity of the tubers. It is essential, in this case, that the crop be handled tenderly and quickly. Machines have been devised for the purpose, but skilled labor, gathering the potatoes from the soil and gently throwing them into piles from which they can be sorted before packing, is very satisfactory.

John Gerard, a celebrated English botanist, grew them in England, following the example of Raleigh, who ordered his own gardener, with a utilitarian purpose, to cultivate them along with other vegetables. The story runs that this man, whose curiosity was intensely aroused by the new plant from America, watched its growth carefully, and when the fruit (sic) was ripe, gleefully plucked it from the stem and tasted it. As he found this part of the plant merely insipid, he spat it out in disgust, and complained to Sir Walter that he had wasted so much time upon the miserable thing: "Is this then your delicious fruit from America?" The reply startled the gardener, for he was told to drag up the offender by the roots, for fear that the other plants might be contaminated. On doing so, however, he was astonished to discover among them a mass of exactly the same kind of tubers he had planted in the spring. "Cook them," said Sir Walter Raleigh, "and then give me your opinion." At the first flavor of this strange vegetable he was delighted, and ever afterwards gave particular attention to increasing his supply of the wonderful potatoes.



MODERN CULTIVATION OF THE POTATO IN LATIN AMERICA.

The old and simple way of cultivating potatoes is slowly disappearing. In highly productive areas the machine for both planting and gathering displaces hand labor. In Latin America the same rule is observed, and the latest mechanical contrivance for expediting work is eagerly adopted on the modern hacienda. Potato fields there are growing in size and productiveness, and where the soil and climate are suitable, potato growing promises to become one of the great agricultural industries.

By such experiences the potato was spread over Europe. In France it was a rare but prized vegetable in 1616; in Germany it was recognized in 1650, and from that time on, Europe, as well as other parts of the older world, gradually accepted it as an addition to the food supply of all peoples. It is unwise to discuss here the mooted point about the so-called indigenous potato of Mexico and Arizona; about the origin of the *S. commersonii* in Uruguay and Argentina; for the settlement of it can not disturb the fact that the *Solanum tuberosum,* the common potato of to-day, came from the west coast of South America, and that the natives of those regions must be given credit of having recognized its food value long before they were discovered by Europeans.

The widespread botanical order of the solanaceæ, to which our potato belongs, embraces plants of little apparent similarity. There are, as members of the great family, among medicinal plants, for example, the hyoscyamus, dulcamara, belladonna, and datura; among food supplies are the thorn apple (a tree, in this case), the artichoke, and the tomato; and adding to man's enjoyment if not to his vital sustenance, the capsicum or the chile of commerce, and the American tobacco. Not many of them have tubers, however, and of the tubers, the potato holds the prize for its usefulness in human economy. The tuber of the plant we are interested in is the common potato.

(Courtesy of U. S. Dept. of Agriculture.)

THE MODERN ANGELUS.

Potatoes are becoming better understood as a food, and while they do not supply all the elements of nutrition as was once supposed, they yet add in many cases just that proportion of starch and sugar necessary, and scarcely obtainable in so serviceable a form from any other source. A first-class potato farm producing as high as 220 bushels to the acre, as in Maine, or 223 as in Argentina, is an interesting sight, and one who looks for it can easily find a full share of poetry therein.

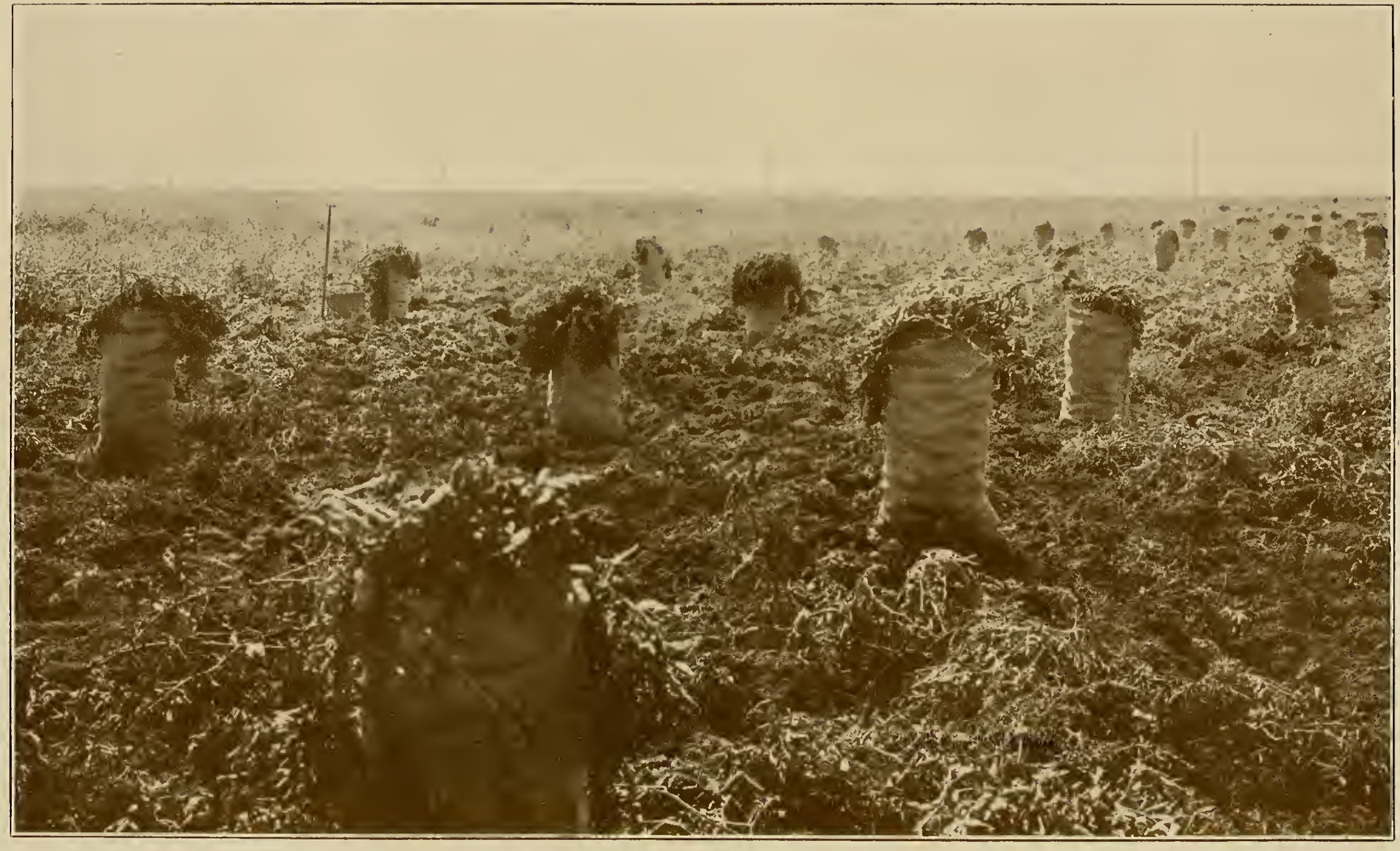
Now, the tuber is a curious provision of nature by which propagation can be carried on by means of the regular and normal plant activity of the seed above ground, and also by anomalous stems, enlarged by the development, to an unusual degree, of cellular tissue, which are below the ground. Potatoes have seeds and fruit like any other member of the botanic kingdom, but when left to themselves it may happen that more energy is expended in storing up food in the tubers, so that flowers and seeds are imperfect. Theoretically it makes little difference which element—tuber or seed—is used for perpetuation of the potato, but practically so much encouragement has been given to the tuber that the seed is habitually ignored. Incidentally it deserves mention that the popular Burbank potato, the spread of which was one of the earliest demonstrations of the genius of the botanical wizard, Luther Burbank, was propagated from the seed, as he had noticed what splendid fruit certain plants were showing, and reasoned correctly that the product must equal the parent.

Exactly what the tuber is, is another question. By some its production is ascribed to a fungous irritation, although this is not proved. As has been said, not all the solanaceæ have tubers, nor are all tubers members of the family. Be the cause what it may, the tuber is not a true root, but a leafless branch, usually below yet sometimes above the ground; the eyes on a tuber are leaf buds which in due time lengthen into shoots and form stems. The contents of a tuber are a reserve supply of food, supporting the young growth until it can put forth roots of its own.

This food supply in the tuber, or in the potato, to be specific, is shown by analysis to be about as follows:

	Parts.
Starch, etc	18. 8
Nitrogenous matters	2. 1
Sugar	3. 2
Fat	0. 2
Salines	0. 7
Water	75. 0
Total	100. 0

although of course variations in these proportions, depending upon soil, climate, and methods of cultivation, are to be expected. It is evident, therefore, that the potato is not a perfect food, and that it lacks sufficient nitrogenous matter while having a superabundance of starch and sugar. That does not destroy its value nor its usefulness, by any means, nor its popularity, for next to Indian corn and rice, the potato is the most widely used vegetable in the world. Mix the beloved "spuds" of the sailorman with meat or other flesh, adding condiments to suit the taste, and a combination is obtained which



POTATOES IN SACKS, AS PREPARED FOR MARKET, WHERE LUMBER FOR BARRELS IS NOT EASILY OBTAINABLE.

In California it is the habit to pack potatoes on the field in sacks. The productive acreage engaged in potato farming is not very large, but where close attention is given to the culture of the tuber, crop returns are highly successful.

can not be beaten for nutrition, digestibility, and flavor. Millions of people have been nourished by the potato, and the cultivation of it increases every generation; to-day no hopeful settler, after trecking into a virgin wilderness, thinks his little garden complete without the pretty patch of potatoes; no domestic or public meal is served without its tuberous embellishment, and after mastering the art of boiling eggs, the next step of the young housewife is to learn how to prepare potatoes. Yet this was not the case at first. Europeans suspected its wholesomeness, and were led but slowly, compelled by the enthusiasm of returning adventurers, to accept it as an addition to their tables.

(Courtesy of U. S. Dept. of Agriculture.)

A BARRELFUL OF SELECT POTATOES.

The tubers are usually packed and shipped in barrels, although crates are also employed. No standard measure for the bag, crate, or barrel has been adopted, but recently certain States (of the United States) have passed laws requiring that a barrel shall contain 170 pounds net. Short weight ought to be so marked. A barrel costs about 22 cents, including the burlap cover. Barrels are used but once for the purpose, as a rule. Standardization is much to be desired. 60 pounds make a bushel of potatoes, and this might be accepted as a practical standard for market.

The Puritans condemned its use because no mention of the potato was to be found in the Bible. Yet its unmistakable excellence finally won the victory, and gave it the worthy position occupied at the present time.

The grand total of potato production for one year amounts to about 5,500,000,000 bushels,[1] and this gigantic crop comes from every continent in the world. Over one-fourth of the output is grown in Germany; not quite one-eighth from Russia; usually a little less even than that, from Austria-Hungary; about one-ninth from France; about one-sixteenth from Poland, and a slightly less quantity from (contiguous) United States. Noticeable annual variations are reported, however, both in world's crops and in those of individual countries. Some countries export largely, and seem to have made a specialty of supplying their neighbors with the market needs of the people; others import almost altogether, the local crops being scarcely sufficient for the purposes of those immediately concerned in the fields; others again, like the United States, are both importing and

(Courtesy of U. S. Dept. of Agriculture.)

A WHARF SCENE IN A TRUCKING REGION DURING POTATO HARVEST.

Market-garden or truck crops are harvested as early in the season as possible, so as to reach the consumer when the price is at the highest. For that reason it is a time of great activity for the truck farmers. In the neighborhood of Norfolk, Virginia, for example, where shipment can be made over the inland waterways, thousands of barrels of potatoes are forwarded in the beginning of spring to all parts of the North Atlantic seaboard.

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[1] A bushel of potatoes has 60 pounds.

exporting nations, due to some extent to near-by frontiers, as well as to popular demand for particular varieties.

In the United States, almost one-third the year's crop is grown in the North Atlantic States, but the group of North Central States east of the Mississippi River runs a close second; of the other subdivisions, the Central States west of the Mississippi are next in importance, and the far Western States are fourth. In the individual States, New York heads the list by acreage, having devoted during 1910, about 438,000 acres to the cultivation of potatoes; Michigan is next with 335,000 acres, Pennsylvania with 320,000, Wisconsin with 260,000, and so down the line; Colorado and California are the most productive far Western States. When it comes to the proportionate yield per acre, however, the figures are different; the State of Maine heads the list with 220 bushels[1] (1910); Nevada is next, with 150 bushels; Utah and Idaho with 142 bushels; Rhode Island with 136 bushels; Vermont and California with 130 bushels, and so on to North Dakota, where only 41 bushels to the acre result from the year's crop.

This illustrates one fact about the potato; it is very susceptible to climate and cultivation. Left to nature, it is only a moderately prolific plant, and can not thrive in a country too hot or too cold, but has its habitat essentially in the Temperate Zone; on the other hand, it responds readily to good care, so that the more it is nursed the better does it grow. The continuous regard for the best methods of cultivation are illustrated in both Maine and California. The climates of these States differ considerably, but results demonstrate the rule. In California, with 62,000 acres given to potatoes, the output was over 8,000,000 bushels, and the industry is still young in that favored region. California has even a "potato king," who has within the last 20 years, developed the industry into its present commendable condition. He is a hard working Japanese and farms over 4,000 acres, making his business a study on modern lines.

The few rules to follow in successful potato growing can be learned by any farmer. First the soil must be suitable, but this is not hard to find. It must be light, so as to offer no great resistance to the enlargement of the tubers; well supplied with organic matter, yet no more than moist, and containing abundance of natural fertilizing ingredients. Well-drained sandy loam is excellent; clay should be avoided. Crop rotation is advisable, as the potato bears well after certain preceding crops, but may wither if succeeding itself too regularly. Liberal manure is necessary, but of the right kind. The rows should be laid off as close together as practicable without interfering with horse cultivation, and generally speaking the seed pieces should be dropped about 12 inches apart in furrows made in the level field and not on the ridges, yet deep enough—say, 4 inches—to afford ample cover to them. It must be mentioned that in speaking of potatoes the word "seed" means the tuber or portions cut from it in which an "eye" has formed; the botanical seed may be used, but no benefit is derived from that method; care must be taken, however, that the sprouts from the eye are not injured, and it is best therefore to use eyes from which sprouts have not appeared. These are technical questions, discussed with suitable detail in agricultural publications. Advice on the growing plant is also to be found there, so that the remark that the death of the potato vine is the signal for digging the main crop is a good conclusion of the paragraph.

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[1] A bushel of potatoes has 60 pounds.

(Photo by Ralph W Lohman.)

THE POTATO CROP OF ANCIENT AMERICA.

Among the Indians of the Andes, and, after the tuber became known north of Panama, among the Indians of North America as well, growing and marketing potatoes were primitive occupations. The vegetable was sold by the piece or by the very smallest weight. The cultivation and consumption of potatoes were largely local.

Marketing potatoes is of broader interest. The commercial principles involved explain the enormous growth of the industry in Europe and the United States and the relatively modest position of potato culture in Latin America. It is an evident fact that immense areas of Latin America, from the Rio Grande to Magellan Strait, are perfectly adapted to potato growing. Peru and Chile are the natural home of the plant; Argentina, Uruguay, and the uplands of Brazil have fine potato farms, and the valleys between the mountains of Mexico, Central America, and the whole Andean region produce the tuber for native consumption, occasionally importing the vegetable for market demands. In Panama, where the rich

Pacific savanas will yield potatoes at less than half the cost of a harvest in the United States, thousands of bushels are imported for canal employees, because the economical way of cultivating and marketing the tasty tuber are not carried out. Of the over 1,500,000 hectares (hectare = 2.47 acres) given to agriculture in Chile, only 50,000 are granted to the potato, although the amount could be almost indefinitely extended, if the means of transport to larger markets were better and cheaper. The "papa" (this word is the Spanish-American for potato, while "batata" is now the sweet potato)

POTATO TRUCK FARMING ON

As the demand for the tubers increases, suitable spots for growing them and affording cheap access to
carried by boat direct to the railway, the potatoes are saved a hard trip overland. Along the east coast
in central California, great areas of potato farms are developing, from which the cities are supplied. In
the country and on them the crops can be loaded for transport. Potatoes form a profitable crop, and

is a standard product in all these countries, and the national agricultural departments are encouraging its more extensive cultivation, but when once the people realize the commercial value of the crop and accessibility to market is assured there will be a noticeable increase in the world's production of the white potato from Latin America.

The uses of the potato as a food have long ago been vindicated. Nothing can dislodge it. Not even the lately discovered dasheen, a Japanese and Chinese claimant to tuberous popularity, will take its place, even though it may be proved to possess more protein than the South American predecessor. Whole books have been written on the culinary art of cooking the potato. Boiled, baked, stewed, or fried, it has been a garnishment to the more aristocratic dishes of every feast since it was discovered, and has supplied many a full meal to the humble masses who do the world's work. Nothing but a poem could tell its praises, and a sonnet is the least tribute through which our gratitude to Peru should be expressed. It is one of the essentials to modern life. To show how the people love it, the story can be told of the mayor of a well-known city where the grasping monopolists had run a corner on potatoes so that the hungry inhabitants were almost compelled to pay a double price for this substantial factor of their daily meal. But this mayor was above his kind; he was a patriot as well as a politician, and on his own initiative ordered sent into the city from outside a quantity sufficient to meet the people's needs and to break the dealers who had so feloniously combined in restraint of trade. When the precious tubers arrived, the bands played, the flags were flung to the wind, the beloved vegetables were sold at cost until the market price was restored to normal again, the people cheered, and the worthy

SAN JOAQUIN RIVER, CALIFORNIA.

market are more and more valuable. If river transportation can be obtained, so that the crop can be
of the United States, in the neighborhood of Chesapeake Bay and the James River, and on the west coast
addition to good soil and climate, these farms have the advantage of numerous streams running through
more attention should be given to their cultivation, both in the United States and in Latin America.

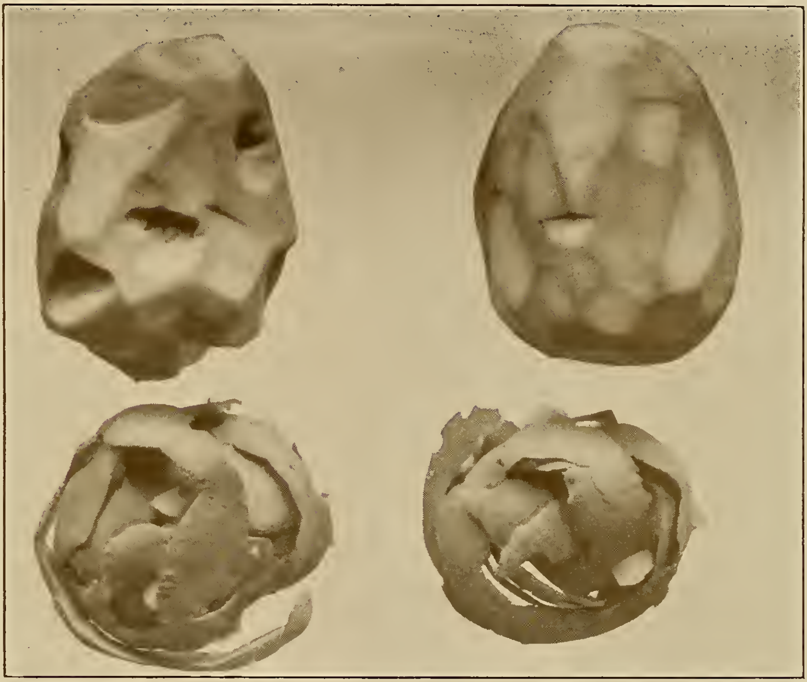
mayor was happy in the thought that he was in their favor for another term.

Potatoes are fed to cattle also and considerable attention has been applied to the processes suitable for obtaining the best results from the otherwise unprofitable proportions of the season's yield. What is not eaten by them as slops can be dried and preserved in a healthy way for any length of time. Even the good potatoes are nowadays desiccated by clever processes, and utilized afterwards with almost as much advantage as when they were fresh. In several countries potato flour is made of a quite satisfactory quality, and is, in fact, in some cases preferable to wheat and other flours, because being of a purer starch, it presents less digestive difficulty to delicate stomachs. Bread made from it is wholesome and palatable and should become better known in countries where potatoes can be grown but where wheat is a costly commodity. Older generations than the one in which we live may remember a farina set on the morning's table; this has long ago disappeared before the onslaught of fin-de-siecle breakfast foods, but it had its value, nevertheless. This farina was a starchy meal made from potatoes, and it was a portion which children had to take or go hungry.

SHIPPING POTATOES IN CENTRAL CALIFORNIA.

In many sections of the country shipping the crop is a well-managed procedure. The tubers are packed into bags, crates, or barrels, carefully loaded in cars and dispatched, even by through trains for a thousand miles or more, to central markets. In other parts of the world the same methodical system is not applied, with the consequence that the profits are lowered.

As a source of industrial alcohol, especially that substance which is commercially known as denatured alcohol, potatoes are being regarded as of increasing value. This is used in the manufacture of varnish, explosives, chemicals, and other commercial articles; in household economy for lighting and heating, and in power engines. As the tuber contains the necessary quantity of sugar or starch, a cheap alcohol can be made from much that might otherwise be sold at a loss. Elaborate instructions are available in all agricultural departments for this purpose, and farmers should not hesitate to profit by such an opportunity to find reward in a by-product like this.



(Courtesy of U. S. Dept. of Agriculture.)

POTATO PARINGS.

Potatoes are pared in the raw state, but after cooking they can be peeled. Skins derived from either method are of value; they should not be thrown away nor fed to animals indiscriminately. Modern farmers' bulletins give advice on this subject, as well as on the best method to be used in paring, both to preserve as much of the potato as possible and to utilize the parings thereafter.

Next to food, however, the greatest value to mankind of our American potato is as a source of starch. In this, too. .. vies with corn. Potato starch is every year proving its merit, and whatever can provide starch, has a long popularity ahead of itself. Starch is one of the essentials of civilization. Its uses are protean, the demand for it is unceasing, and for both art and industry the supply must be constant. With such a varied field for its activity, therefore, no one should doubt that few blessings to humanity can surpass that which came to the world through the famous potato.

AMAZONIA[1]

NEW DOCKS AT PARA, BRAZIL.

PERHAPS a fact not generally known is that South America is greater in area than North America, and situated entirely to the east of the Northern Hemisphere, a north and south line along the Atlantic coast of the United States passing through the Panama Canal along the west coast of South America. Valparaiso in Chile is directly south of New York. The most easterly point at Pernambuco, Brazil, is but three days' sail across the narrowest part of the Atlantic to Africa.

TOPOGRAPHICAL FEATURES OF BRAZIL.

The 21 stars shown on the yellow and green flag of Brazil represent the United States of Brazil, comprising an area 200,000 square miles greater than the 48 States of the North American Union.

It is a noteworthy coincidence that the boundary lines of Brazil join everyone of the other countries of South America excepting Chile and Ecuador and it is said the relations between these sister Republics has always been especially amicable.

There are upwards of 3,000 miles of Brazilian coast, extending from the English, Dutch, and French Guianas on the north to the boundaries of Argentina, Paraguay, and Uruguay on the south, comprising several large rivers, including the Amazon, which extends upward of 2,000 miles west to the frontier of Peru at Tabatinga.

This is not an attempt to write up South America or to even attempt to cover Brazil, but simply an effort to tell of some observations as consul and traveler in that portion of north Brazil known as "Amazonia."

That part of South America known as "Amazonia" comprises the two large and most northerly States of Brazil, Para and Amazonas, which are covered by the forest primeval for hundreds of miles on each side of the mighty river, extending upward of 2,000 miles westerly along the line of the Equator from the bocca, or mouth, to the Brazilian frontier at Tabatinga, reaching yet through Peru almost another 2,000 miles to the head of canoe navigation, near its several sources in the Andes.

What lies beyond the margins of the almost impenetrable forest which fringe the old gold colored water of the great rivers is a sealed book, whose pages must be turned by a future Stanley of "equatorial America."

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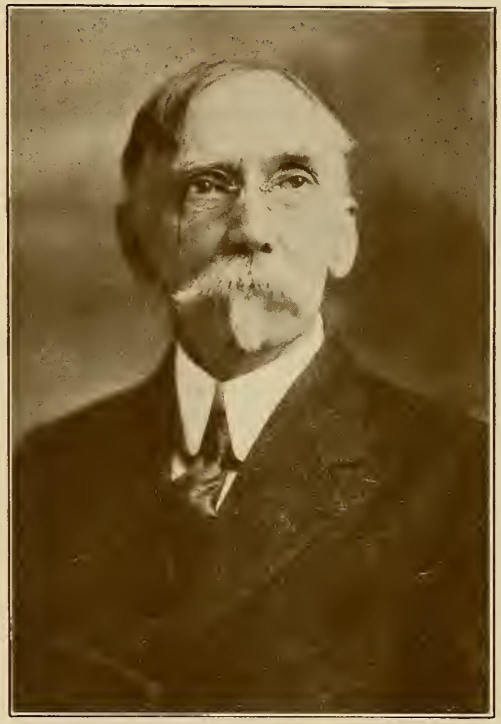
[1] Maj. Joseph Orton Kerbey.

The vast area of Amazonia, which is practically unknown, is briefly described in the books of the geographers simply as "the great Amazon basin," and contains by actual count over a thousand tributaries which drain portions of the British, French, and Dutch Guianas, penetrating the interiors (by the backdoor as it were) of Venezuela, Colombia, Ecuador, and the vast montana of the orient of Peru, and the tremendous area of cis-Andine Bolivia to the south, which with the two Brazilian States cover practically the territory between the Orinoco and the La Plata, greater than the United States between the Rocky Mountains and the Mississippi.

TRANSPORTATION ON THE AMAZON.

Except in the cities of Para and Manaos and some large towns and estates, there is not a wheeled vehicle to be seen in all the "land of to-morrow." Everything goes by water, there being no necessity for railroads in a land where every man or settler can have an ocean steamer put its nose at his own landing every day of the year.

Numerous types of ancient and modern water craft may be seen, from the ocean-going steamer and double decked side-wheel or twin-screw bay and river boats, the odd looking sail and fishing smacks, down to the picturesque canoes of the Indians, who may have guided their floating habitations, laden with their families and cargo of the valuable products from the distant tributaries, perhaps a thousand miles, and in many instances having risked the dangerous rapids of the Madeira and Mamore of Bolivia.



(Photo by Harris-Ewing.)

MAJ. JOSEPH ORTON KERBEY.

In the interiors or alto Amazon of eastern Peru and Bolivia there are no roads except the "camino," which is merely an Indian trail or cow path through the forest, sometimes used by jaguars or other savage beasts of the forest, and which the luxuriant growth of a day may perhaps conceal.

The settler or rubber gatherer on the smaller tributaries must depend entirely upon the Indian paddler of his individual canoe for communication with the landings of the large boats as well as for social or neighborly visits. These conditions would seem to offer a desirable field for the introduction of water motors rather than autos.

NAVIGATION OF THE AMAZON.

The Emperor Dom Pedro II decreed the free navigation of the Amazon, which practically includes the entire system, as the Republics located at the head or sources of navigable waters are entitled by international law to an outlet to the sea.

(Photo by D. M. Hazlett.)

CITY OF PARA FROM DECK OF STEAMER.

It has been stated in official consular reports that the aggregate navigable waters of the Amazon and tributaries for all sorts of craft was estimated to exceed 45,000 miles.

The average depth is from 40 to 150 feet and the average width from 6 to 40 miles.

At the mouth near Para the river is 138 miles wide, including the island of Marajo and the northern and southern outlets. The immense volume of water discharged marks a path of yellow water in the blue of the Atlantic easily distinguishable for 150 miles at sea, creating a fresh-water sea while out of sight of land. This yellow or old-gold colored water uniting with the equatorial current trends to the north at the rate of 6 miles per hour, and entering the Caribbean Sea forms what is recognized as the Gulf Stream.

The writer has been over the Andes several times by the route known as the Maranon or most westerly affluent, and also by the Pichis or Ucayali and Urubamba, by canoe and mule frequently at an altitude of 3 miles and over, which even the bird men have not approached.

In a pass of the Andes beyond Cuzco, at an elevation of 16,000 feet, a little lakelet was formed by the melting snows on the tops of the adjacent peaks. I "discovered" that one outlet trickled back to the Pacific or Lake Titicaca, while the other flowed northeasterly and uniting with other tiny streams soon gathered sufficient volume to be baptized as the Rio Vilcanote, which unites with the Urubamba near Cuzco, and flowing through the Ollantaytambo Valley, in the land of the Incas, eventually becomes the Ucayali, which after a thousand miles joins the Maranon at or near Iquitos and becomes the Amazon, which flows through the forests for another 2,300 miles to the sea.

It was the writer's privilege to have followed the source on foot, by mules, and canoes to the head of navigation and thence by steamer to the mouth near the consulate at Para.

THE AMAZON STEAM NAVIGATION CO.

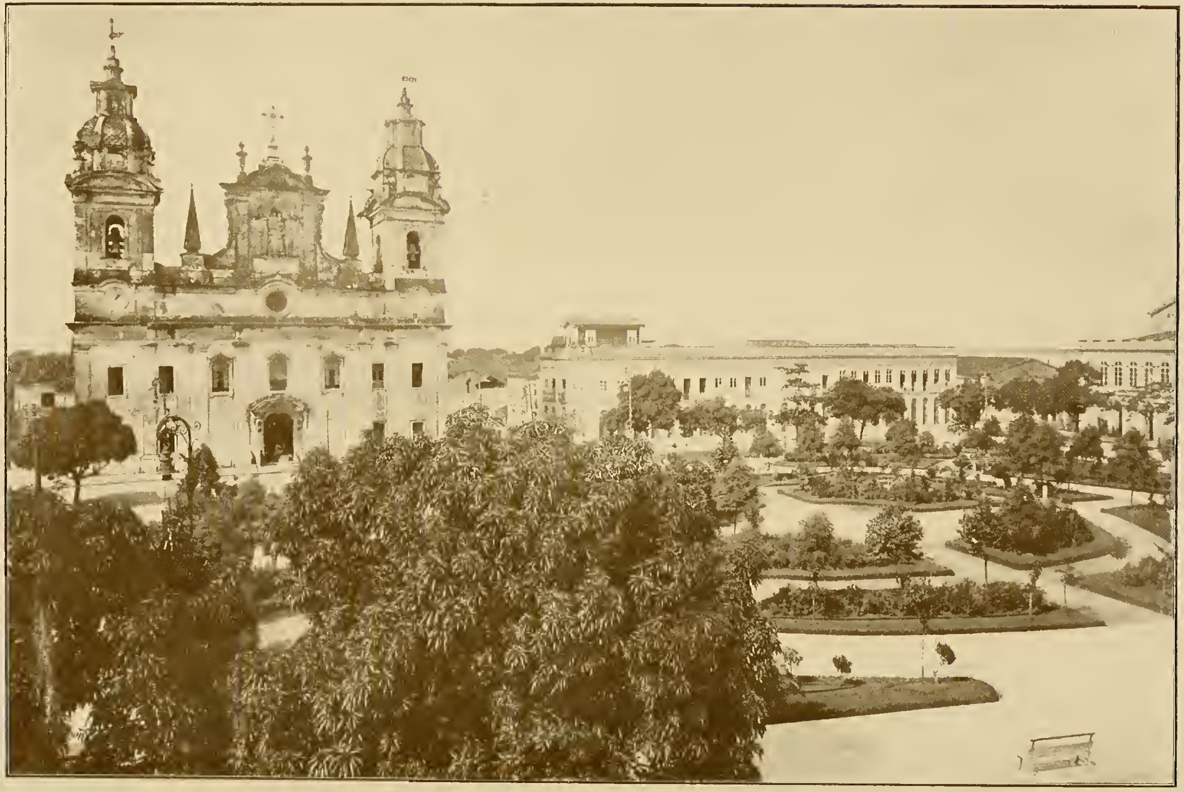
A prominent official of the large corporation known all over Amazonian waters, which is owned by British capital but has been operated by Brazilian captains and crews, corroborates the statement that there is over 40,000 miles of navigable water, adding the interesting information that the books of the company show that their steamers had during the past years averaged over 500,000 miles.

This fleet practically controlled transportation until within the past few months, when the contract with the Brazilian Government expired by limitation, the President of Brazil declining to renew, resulting in a strike of the English stockholders, which caused a tie-up of the entire fleet of about 75 steamers.

During a recent visit to Para I personally counted 32 of the best steamers laid up with their noses in the mud.

The Government maintained a position of indifference, it being understood that a change from the policy previously prevailing was desirable, which would permit of independent competition, enabling each steamer, of whatever nationality, to enjoy equal privileges. It was intimated that the Government would eventually buy the steamers.

A number of steamers belonging to merchants engaged in the rubber and allied interests on the rivers remained in service, which, with the large fleet of the Brazilian Lloyds, easily supplied the places of the striking corporation.



CATHEDRAL IN PARA.

The cathedral here is said to be the second oldest church in South America. Misericordia Hospital is at the right.

LOCAL TRANSPORTATION FACILITIES.

The Lloyds, as they are familiarly termed, operate a big fleet of good steamers that do the extensive coasting trade from the extreme south at Rio Grande do Sul up 3,000 miles of coast and 1,000 miles of the Amazon to Manaos, which is the distributing point for the upper Amazon rubber regions.

Relatively Manaos corresponds to St. Louis, of the Mississippi, reaching a thousand miles westerly to Peru by the Rio Solimoes, as the upper Amazon is called by Brazilian authorities, which corresponds with our Missouri.

Venezuela, Colombia, and Ecuador may be reached in less than the thousand miles by the Rio Negro, which flows from the north to Manaos, while the extensive territory of Bolivia may be entered by 500 miles of the Madeira to the railroad around the falls of Mamore, now being constructed by American capital and energy.

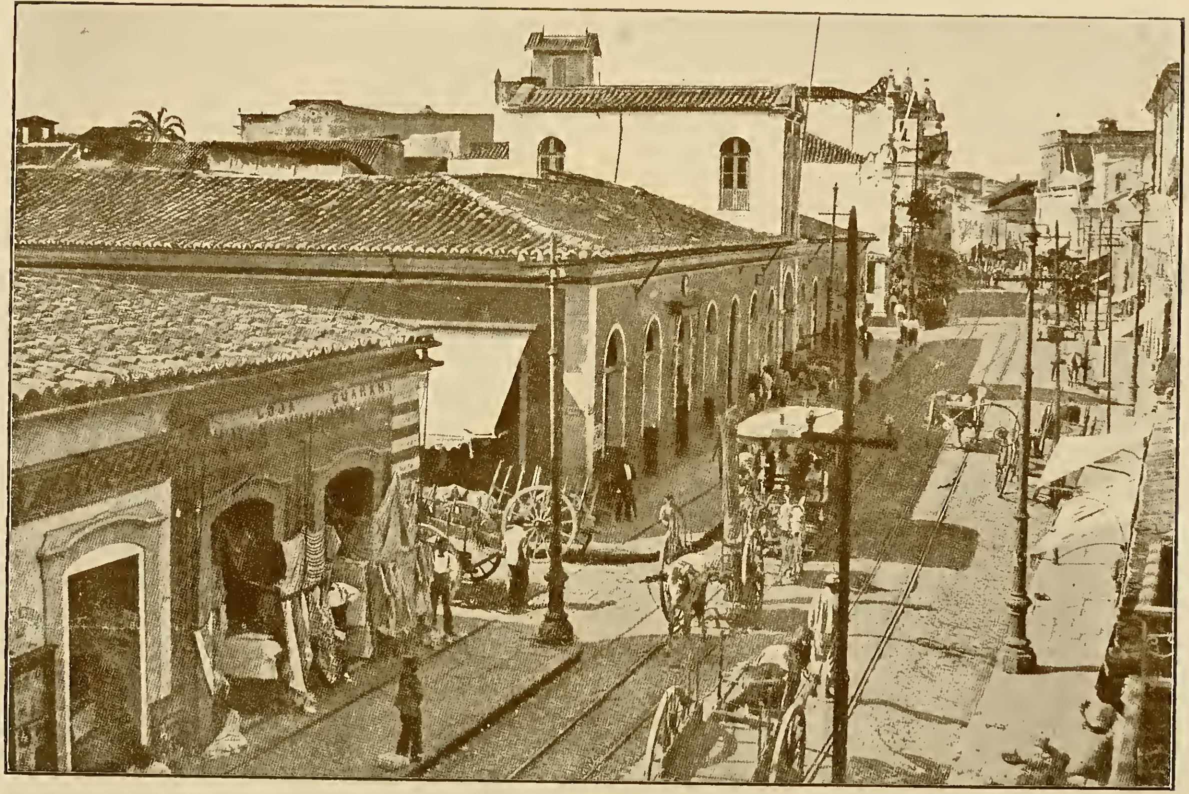
(Photo by D. M. Hazlett.)

PARK AND THEATER AT PARA.

FOREIGN TRANSPORTATION.

Many well-informed travelers are surprised to find ocean-going steamers sailing every fortnight from New York and Liverpool over 3,000 miles of Atlantic Ocean via Para and thence up the Amazon 2,300 miles farther to Iquitos in Peru, without breaking cargo or the transfer of passengers, at comparatively low rates for first-class accommodation on board.

The interesting round trip may be made direct from New York to the upper Amazon by the Lloyd Brazileiro new ships or the older



RUA JOAO ALFREDO, PRINCIPAL SHOPPING STREET OF PARA.

vessels of the British Booth Line at a considerable reduction for first-class passage, amounting to less than an excursion to the Mediterranean and the Nile.

The usual rate for passage by the Booth Line is more than by the Lloyds, but the Lloyds, not being in the combine, or steamship trust, are at liberty to make special rates, which give equal if not better accommodation than the British lines.

The first-class passage to Para is $80 one way, with reduction for return. The fares up the Amazon vary, the boat selling transportation only, making a separate charge for meals.

I would suggest that for practical business purposes a salesman supplied with appropriate samples packed in small trunks for convenient handling might make this Amazon trip in comfort and with profit, utilizing the steamer as headquarters for the display of samples in the numerous ports.

The Lloyds steamers are comfortable and well conducted by officers of the Brazilian navy, who are polite and obliging and will no doubt do all that is possible to forward American trade. The ships stop long enough in the various ports for the commercial traveler to canvass each place.

The time to the Amazon, with call at Barbados, is about 13 days, and from Para up the river about the same, depending on the stops. The distance from New York to Para is 2,915 nautical miles, and from Para to Iquitos in Peru 2,300 miles.

Aside from the business or commercial feature, a trip on the Lloyd Brazileiro to the head of the Amazon may be made a very enjoyable excursion party, including ladies and scientists. The latter may collect curios and the ladies orchids and rare plants as well as monkeys and parrots and birds of rare and gorgeous plumage, such as the white heron, from which the aigrette feathers are obtained. As the steamer returns direct to New York the collector can store his finds in the same cabin of the ship that he has occupied during the long cruise.

PRODUCTS OF AMAZONIA.

While South Brazil has the monopoly of the coffee trade, which may be also grown profitably in Amazonia, it requires expensive cultivation and is liable to depreciation in transit and storage. Amazonia produces in abundance, with only the cost of gathering the valuable natural product of "hevea" rubber, which is, next to bullion from the mines, the most valuable cargo afloat. Rubber is what is known as a safe cargo, that is, not liable to damage in transit or depreciation in storage, but rather increases in value by drying or evaporation. When consul I frequently invoiced a cargo worth $500,000.

In addition to the rubber of the best quality, Amazonia produces in abundance cocoa, Brazil nuts, hard and dye woods, and numerous valuable products for the materia medica, from the immense forests of millions of square miles of which it has been said, "gold grows on the trees of Amazonia."

The forests of Amazonia are more valuable than the rich silver and gold mines of the foothills of the Andes in Peru and Ecuador, which I term "the California of South America."

CLIMATE AND HEALTHFULNESS.

Usually the first question of a prospective traveler to almost any part of South America relates to the climate and healthfulness and best season for visiting that land of everlasting sunshine and occasional hurricanes.

It is surprising to note the number of intelligent persons who have obtained erroneous impressions of living conditions in Amazonia. To the numerous questions as to the best season for travel or visiting that land, I have the stereotyped reply that there are no "seasons," as we understand the term on the Equator, every day in the entire year being alike. They are all "June days," the sun rising at precisely the same moment every morning and, I may add, that like a red-hot electrical balloon it sails across the land, disappearing at the same hour behind the Andes, when immediately descends the dark tropical night, there being no twilights, no "in the gloaming," until the southern moon comes up as large as a cart wheel and apparently close to the earth.

It is hot in the middle of the day, and those who forget the admonition of the natives, that "only dogs and Englishmen go about in the sun," are apt to "speak disrespectfully of the Equator." Para, being almost directly under the vertical sun, is hot during the day; but an experience of several years as a resident, including the late months of the summer of 1911, when I visited Para, I found it not nearly so hot as New York and Washington in June and July.

The intense heat of the day has the effect of causing rapid evaporation of the fresh water surrounding Para, which is precipitated in drenching rains almost every evening at the same hour, cooling the atmosphere and making the nights agreeable.

To find a cooler latitude one must go either north or south.

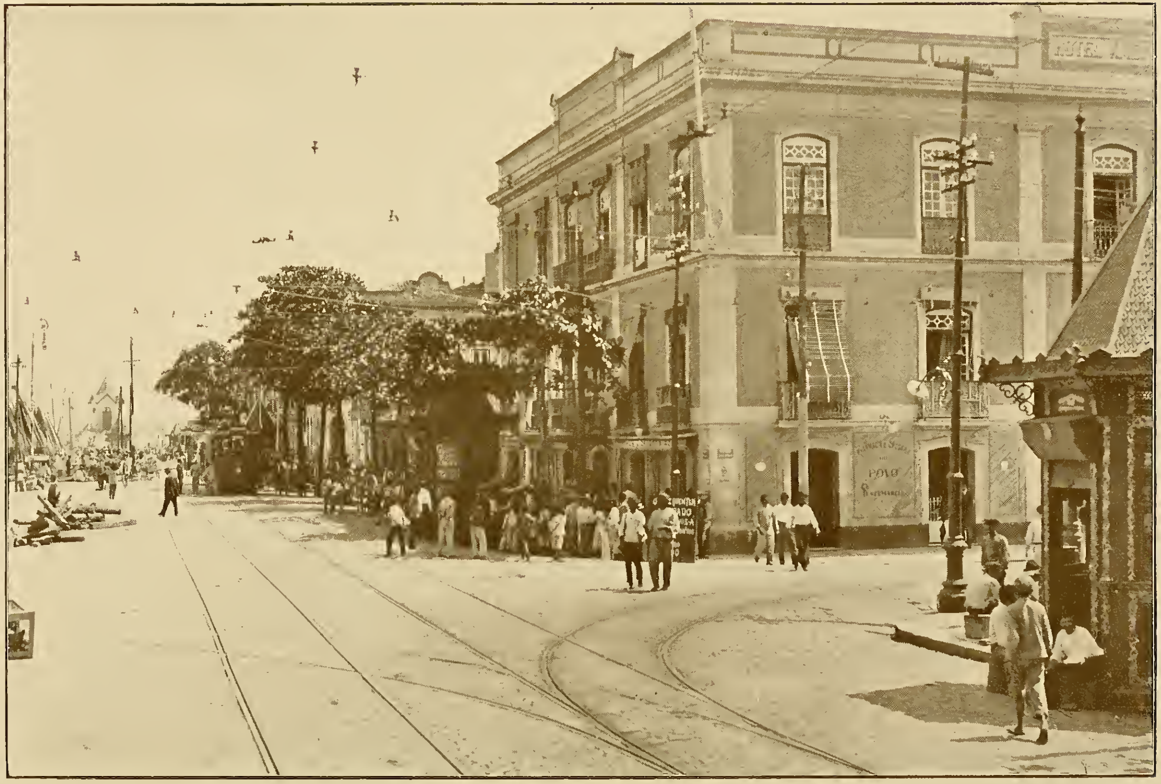
The following humorous skit will indicate the extent of summer skies and also serve to illustrate the free exaggeration regarding heat and its effects:

HOT IN BRAZIL.

"Hot in Brazil?" said the young man who had just returned from a trip to South America. "Well, I should say so. Do you know for days at a time we couldn't take our after-dinner siesta on account of the peculiar noises." "What noises?" asked the blonde stenographer, innocently. "Why, the coffee popping on the trees. You see the sun was so hot the grains just roasted before they were picked." The old traveler yawned. "Rather warm away down south, bub," he rejoined, laconically; "but when I was on the Amazon you could not sleep at night. Every once and awhile there would sound the most extraordinary crackling noise that ever fell upon human ear." "What were the sounds, Major?" And the major yawned again and replied: "The rubber trees stretching themselves."

PALM AVENUE, PARA, BRAZIL.

This avenue is locally known as "Dezeseis de Novembro" (16th of November), named in honor of a national holiday.



HOTEL AMERICA, FRONTING THE MARKET WHARF AT PARA.

HEALTHFULNESS.

Medical science has located the "zone of unhealthiness" on the Equator, because of the prevalence of the malarial fevers, which, they say, destroys more human life than all other diseases. Amazonia has suffered unjustly from this misrepresentation. The bugaboo of "yellow fever" is one of several aliases of malaria which has been responsible in the past years for the comparatively slow growth of the cities of Para and Manaos. In late years, owing to improved sanitary conditions, the population has almost doubled.

Rio and the ports south of Rio Grande do Sul, which suffered for many years, following the example of Habana and Panama, under direction of the eminent Dr. Cruz, have effectually cleansed the cities, including Para, so that there are no fatal cases of "febre amarella." It is safe to advise that there is no danger to be apprehended from the fever.

An eminent Brazilian physician advises me that there are more deaths relatively from pneumonia in New York and the cities of the United States than from yellow jack in Para.

During my residence as consul it frequently became a duty to relieve sick Americans or to bury sailors whose dissipation had resulted in exposure, which is fatal. The fever being endemic, but never epidemic, is not considered to be contagious, and Brazilians say if the disease is attended in time or in the early stage there is absolutely no danger. The advice of physicians familiar with the treatment is to live well as a preventive and to avoid midday sun and wet nights.

GEOGRAPHICAL DIVISION.

Geographically, as well as commercially and otherwise, north Brazil, comprising Amazonia, is distinct from south Brazil. The coast line from Pernambuco, running almost due east and west for a thousand miles to the Amazon, marks the division.

Para and the Amazon is as close to New York or Washington as it is to the Brazilian capital at Rio de Janeiro. Para is recognized as the halfway stop between New York and Rio.

There is no inland communication through the interiors of Matto Grosso and Minaes Geraes, between Para and Rio, the only method of correspondence being by cable or by steamer along the coast, requiring several days.

Para and New Orleans, the twin sisters and seaports of the two great rivers, the Amazon and the Mississippi, have been mentioned as desirable points for uniting the trade of the two great valleys of the earth.

A glance at the tonnage statistics will disclose the fact that the bulk of South American trade is handled at New York for all sections.

Relatively, it is as far off the direct route of a steamer from New York to Rio de Janeiro to sail westerly to Para and the Amazon as it would be for the same steamer to go out of her way into the Gulf of Mexico and ascend the Mississippi to New Orleans.

The moral of this effort to describe the resources of Amazonia is contained in the statement that the Amazon and north Brazil require a distinct steamship service between the United States and the Amazon exclusively, which might better be performed between the ports of New Orleans and Para.

STEAMSHIP LINES TO THE AMAZON.

Of the numerous steamship lines to South America, there are but two reaching Para and the Amazon direct, namely, the Lloyd Brazileiro and the English Booth Co.

The Booth Co. is an English corporation that realized the importance of the Amazon trade and devoted their energies exclusively to its development, earning enormous profits from the monopoly of handling rubber, etc. It is no more than justice to add that they did good service, and probably all the trade Americans enjoy there to-day is due to the satisfactory service. They have been in this trade over 50 years, their fleet of cargo steamers operating a triangular service fortnightly between New York, Para, and Manaos, and Liverpool.

The Booth is a wealthy corporation, in the enjoyment of special facilities in the way of docks at Manaos and privileges at the new docks at Para.

Their principal service extends to Liverpool, via Lisbon and Havre, to which points they run a fine class of steamers, the passenger traffic to Europe being heavier than to New York.

Though Manaos, a thousand miles up the Amazon, is considered the end of the voyage, they run a steamer monthly another thousand miles up the river to Iquitos, in Peru.

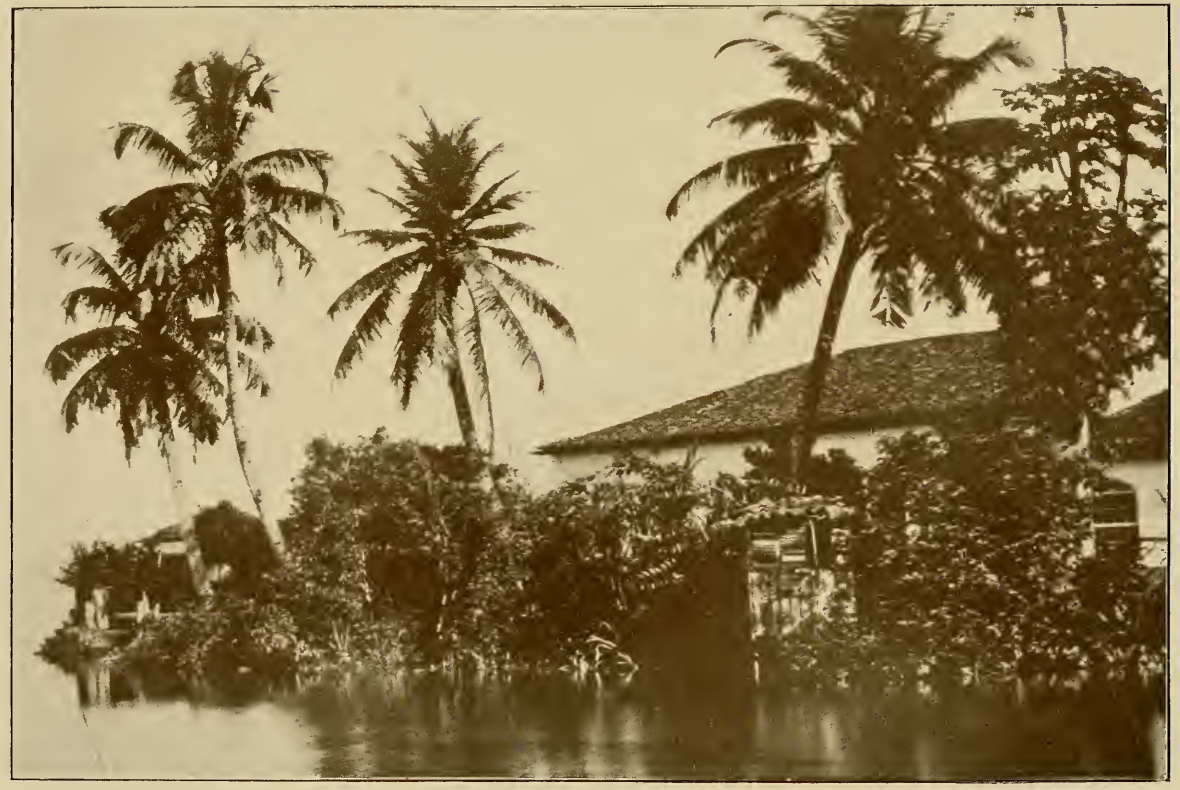
The Lloyd Brazileiro is the Brazilian steamship line, a well-known corporation controlled by the Government and commanded by a corps of naval officers detached for that service in time of peace.

As previously noted, the Lloyds perform an extensive service on the inland waters of Brazil, and cover an enormous coast service, reaching all the ports in 3,000 miles, from the extreme south along the coast and up 1,000 miles of the Amazon to Manaos. They possess a fleet of 90 vessels of all descriptions.

In connection with the coasting steamers the Lloyds have for several years operated a line of excellent steamers between the Amazon and New York.

THE LLOYD BRAZILEIROS AMERICAN SERVICE.

Several years ago the Lloyds Brazileiro extended their service to New York from Para, via the Barbados and the West Indies, with sailings monthly, performing the service regularly to the satisfaction



HIGH WATER ON THE LOWER AMAZON.

of shippers and passengers. This additional mileage was added to the coasting trade, comprising 3,000 miles of Brazilian coast and 3,000 additional from Para to New York. As the ships sail, Para is the halfway point between New York and Rio, as Barbados is halfway between New York and Para.

The Booth Line extends from the Amazon to Europe with calls at Madeira, Lisbon, Havre, and Liverpool. Naturally the Booth people serve the home country best in service and class of steamers.

The Booth line has added to its already large fleet by purchasing more steamers, while the Lloyd have built several steamers of modern construction specially adapted to the requirements of the trade.

Three of the elegant new steamers have been assigned to the American trade in addition to their coasting service, namely, the *Sao Paulo*, the *Minaes Geraes*, and the *Rio de Janeiro*. They are sister ships of 7,000 tonnage, twin screw, equipped with wireless telegraphy, deep-sea sounding apparatus, and all modern appliances adapted to the comfort of first-class passenger service and freight traffic. The cabins are all outside, located as near as possible amidship, which, with electric fans in every room as well as in the elegant saloons, add to the comfort of the tropical voyage. The upper or boat deck affords a generous space for all-around promenades for those who require exercise, while those who prefer comfort lounge in steamer chairs under the awnings.

STEAMER SAO PAULO OF THE LLOYD BRAZILEIRO.

A SUMMER VOYAGE TO THE EQUATOR.

With a view of illustrating the feasibility of a summer vacation to the Tropics directly under the Equator, through the West Indies to the Amazon at Para, after the manner of the excursions to the Mediterranean and the Nile, this story of a personal experience in June, July, and August of the present year is offered.

Having made the trip both ways previously by both the lines, I selected, through preference, the Lloyd Brazileiro steamship *Rio de Janeiro,* advertised to sail from Bush Docks, South Brooklyn, on Saturday at 3 p. m. But with a remembrance of frequent delays, I sauntered from the Thirty-ninth Street Ferry, under the shadows of the big warehouses, searching for the Brazilian steamer, which I found almost submerged in piles of cargo which they were leisurely loading in the holds. Realizing that there was working of cargo for several hours, I put in the intervening time walking the streets of south Brooklyn.

On my return to the ship I was gratified to meet Capt. A. R. Graca, the official representative of the Government of Brazil's interest in the Lloyds in New York.

Capt. Graca is recognized as an authority on Brazilian marine service, being an officer of distinction in the Brazilian navy, detached on this duty. Accompanying the captain was Mr. W. J. Raeburn, the American official in charge of the office located at 8 and 10 Bridge Street.

I was specially honored by an introduction to Capt. Willington, of the steamer *Rio de Janeiro,* whom I found to be a most courteous gentleman of a distinguished-looking type. In response to Capt. Graca's suggestion to Capt. Willington to be good to the ''Americano,'' he cordially invited me to be at home on board of his ship. He and all of the officers speak English. The ship was scrupulously clean and neat, notwithstanding the confusion incident to the handling of cargo, and in response to my compliments the captain laughingly referred to Capt. Graca as the only critic.

AT SEA.

In the gathering darkness about 8 o'clock the *Rio de Janeiro* glided from the docks, piloted by a tug into the middle of the stream, and as soon as she straightened up pointed her nose to the south for a run of six days without sight of land. The passengers who had crowded the rail while the ship was lashed to the dock, quietly separated for their rooms when the ship gently rolled on reaching deep water. The Lloyd steamers are good sailors, due to the generous beam, supplemented by the bilge keel.

I was assigned the cabin de luxe, which I greatly appreciated, and take pleasure in an attempt at description of the elegant furnishings. The cabins de luxe are small rooms elegantly furnished. The walls are decorated in green and gold with fine hangings or portières at the windows in place of the usual porthole.

The bed is a fine specimen of brass handiwork of the single variety, elegantly dressed in fine linens. It is not a bunk attached to the wall.

The toilet arrangements are modern and convenient, with a dresser or wardrobe, a writing stand with a supply of the ship's stationery, and large easy chairs. I found the electric fan rather breezy until one of the stewards regulated the revolutions, which modified the draft. This fan was not generally required after the ship had crossed the Gulf Stream.

BRAZILIAN PALMS.

The greatest variety of palm trees are native to Brazil, especially in the Amazon River region. A general catalogue of ornamental plants, ferns, and palms, published in 1876-77, in three volumes of 300 pages each, contains the names of more than 22,000 specimens.

The ships are of course supplied with electric lights, and when the saloons with their elegant furnishings are brilliantly illuminated the ship presents a gay appearance.

There are several special cabins for families or special guests in addition to the cabin de luxe. The ladies are provided with a drawing-room and a music room, while the gentlemen can enjoy a smoke in the smoke room and bar on the hurricane deck.

AT SEA ON THE LLOYD.

The first night at sea the excursionist, tired out with the preparation for the voyage, usually retires early, and despite some squeamishness sleeps well rocked in the cradle of the deep, but is likely to experience some discomfort during the first few days or until the ship has crossed the Gulf Stream.

It should be remembered that the general course of the South American steamer leads southeasterly, the ships for Rio and Buenos Aires making a considerable detour easterly, being out of sight of land during the entire voyage of 18 to 24 days. Occasionally they call at the Barbados for coaling, passing the most easterly point of South America at Recife (Pernambuco).

The Lloyd Brazilian and the Booth Line make a course more southerly, keeping west or inside of the Bermudas and east of the Bahama group; sometimes passing in sight of desolate Watlings Island or San Salvador, the first landfall of Columbus, and thence between San Domingo and Porto Rico, crossing the historic path of the discoverer several times. The ship is almost constantly in sight of one of the West India group; before losing one island in the rear we see another looming up in front, among which is St. Kitts, known as the birthplace of Alexander Hamilton, the financier and statesman of the Revolution and friend of Washington; also the Danish possession of St. Thomas and the French islands of Guadeloupe and Martinique, the scene of the terrible eruption of Mount Pelee, at the foot of which 30,000 were buried in a couple of hours. The steamers pass close enough to the beautiful shores to permit passengers seeing the statue of the Virgin, which is the solitary object left standing.

On a hillside a short distance from the destroyed village of St. Pierre, in a setting of gorgeous tropical plants, is the monument marking the birthplace of the Empress Josephine.

The British island of the Barbados is reached in a day's sail, where a pleasant stop of 24 hours is enjoyed in visits to the interesting island, called "Little England." When a young man, Washington visited Barbados, the only occasion upon which he was out of America.

AGREEABLE ROUTINE ON BOARD BRAZILEIRO.

The regular routine on board of the Brazilian ships is the same as that practised on all passenger steamers. The passengers are awakened early by the tramp, tramp, overhead of many barefooted Portuguese sailors, creating an impression of a fire, but who are only throwing water from the hose at those who are armed with brooms or mops. This is called washing down the decks, and I verily believe the same process would be carried out if at the same time there were a drenching rain or a heavy sea washing the decks.

I take the opportunity to say a word in refutation of the cheap assertion that the Brazilian steamers are lacking in sanitary equipment and practice. With an experience of some years and many voyages on all lines, I am free to say that the new Brazilian boats are in a sanitary condition, both above and below decks, and decidedly superior to the older vessels of competing lines. The most minute attention is given to the cabins, which are rigidly inspected by the first officer, the doctor, and purser every morning. It goes without saying that the Lloyd steamers are fitted with the best type of bath appliances, and what is better, there are several elegantly fitted bathrooms on each of the new steamers.

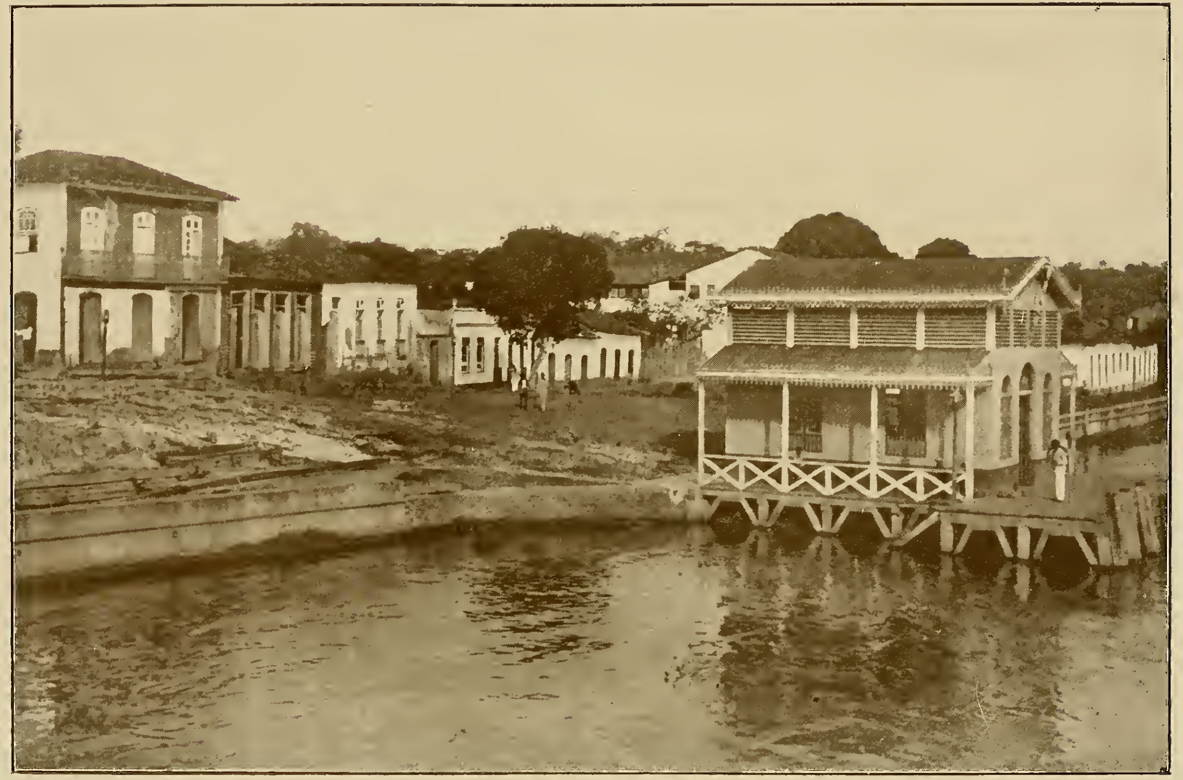
After the bath the steward will serve in your cabin early coffee, strong, but clear and of delicious flavor. There is no criticism on the Brazilian "desajuno," as the early coffee is called, grown in the land of coffee and made fresh by those who live where the delicate aroma of the white bloom fills the morning air.

THE CAPTAIN'S TABLE.

In the elegant dining saloon there are two principal tables, with seating accommodation for 50 first-class passengers, served by a corps of neatly uniformed stewards, every one of whom seems to try to make himself useful in a quiet way. The cuisine is decidedly French, while the menu cards are written in Portugese, with an occasional dish in English, often spelled wrong, but properly served. An effort is made to prepare dishes to suit the varied appetites of the American or English. The meals are of course served in courses. The only criticism I found was in the abundance and variety of the dishes.

At the captain's table the conversation is usually in English, led by the courteous captain.

Another table corresponding to the captain's is provided for the Portuguese or Brazilian passengers who may prefer being together, the service being the same, and is presided over by the first officer, the doctor, and purser, with the young officers in uniform.



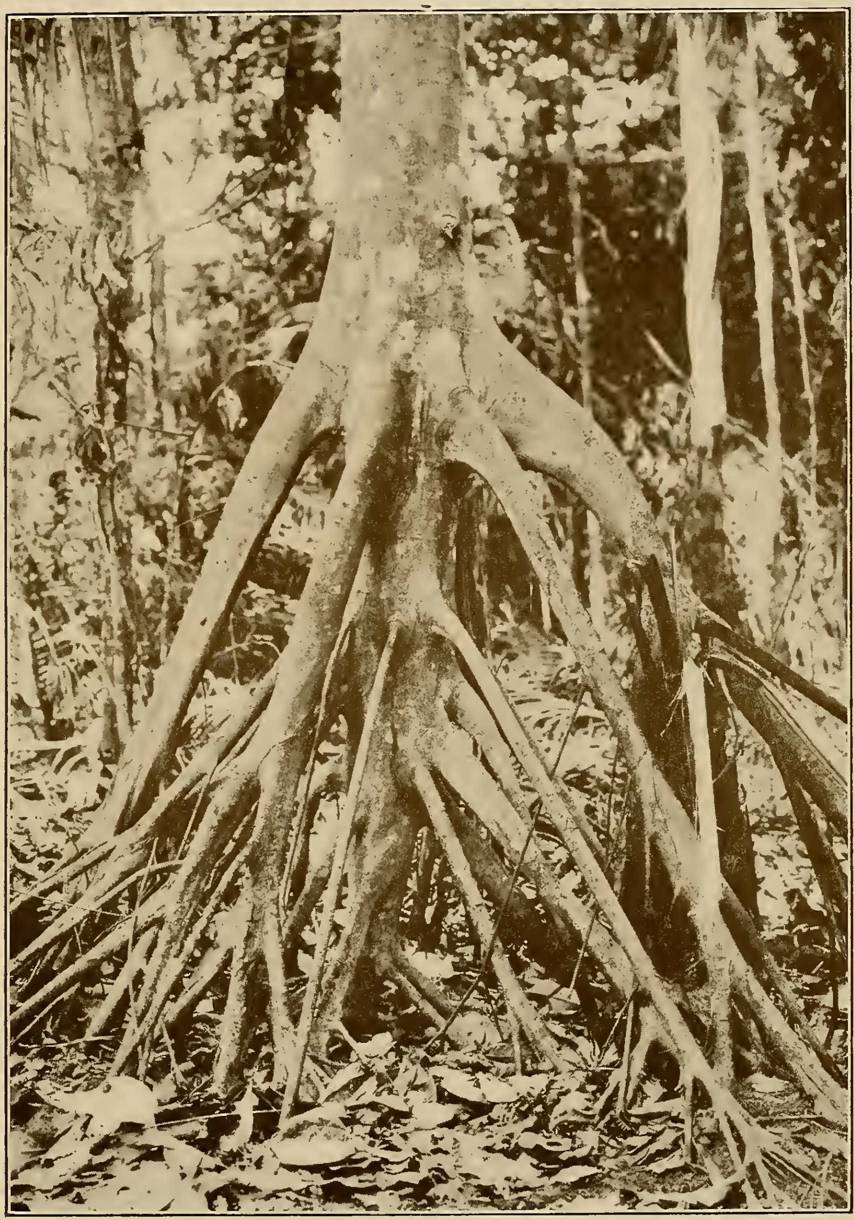
A VILLAGE AND LANDING ON THE LOWER AMAZON.

Seated at the table with us was a young Englishman, a naturalized citizen with British prejudices, en route on the long voyage around South America as the agent of two of the large manufacturers of fine cutlery, tools, and fittings of every description in Philadelphia. He carried seven large "boxes," as he called the packing trunks, packed with heavy samples. He expected to spend a year on the route around South America.

There was also a New York commercial man and his wife, bound for Rio and Buenos Aires to boom business between those countries and New York. He was a typical American drummer, who had never been in South America, but was sure that he would be able to do business on the American plan. They both made the impression that they were having a holiday jaunt.

BUTTRESSED TRUNK OF TREE COMMON IN THE AMAZON VALLEY FORESTS.

Learning that one of the staff of the Pan American Union which had corresponded with them was a fellow passenger en route to the Amazon, they did me the honor of telling me of their plans. In reply to requests for information and advice, I suggested that they pay a first visit to their consul and get his advice as to procedure before taking any samples ashore. But the New York man thought it an unnecessary delay and advised the English friend to put his seven boxes of samples before the Brazilian customs officer as baggage and samples. They were rushed from the gangway on a truck through the massive doorway of the *Alfandega* to await leisurely



TYPICAL TREE IN THE OVERFLOWED SECTIONS OF A BRAZILIAN FOREST.

examination, the owner dejectedly accompanying his New York friend to the hotel without even a grip.

My suit case was "chalked" by the inspector without examination as a compliment and a case of 100 big books passed. The owner of the seven boxes was delayed, so that he missed a connecting steamer. By negotiations and after several conferences on so-called "samples" of fine cutlery, in gross packages, he was assessed $350 as duty and expenses on his samples, which might have been avoided by first going ashore to confer with the consul and inviting the merchants aboard to see samples.

During the voyage I was particularly fortunate in forming the acquaintance of one of the principal merchants of Pernambuco, who, accompanied by his Brazilian wife, was returning from a visit to New York, where he had spent his earlier years with a firm doing business with South America, but had been in extensive business for himself during a residence of 35 years.

As the crossing of the Gulf Stream had the effect of sending many of the passengers below, we had the smoking room to ourselves. He was a good listener and I think rather enjoyed the exchange of personal experiences and the relation of some adventures in the upper Amazon. He had been sufficiently interested to buy the books, "The Land of To-morrow" and "O Consul Americana" on account of the agitation when consul, and afterwards, of connecting the two great rivers and valleys of the earth, the Amazon and the Mississippi, by direct steamship service between New Orleans and Para.

He agreed with my proposition for confining the service exclusively between the Gulf ports and the Amazon as being more direct and logical, as well as more economical, avoiding the congested wharves of New York with the exorbitant fees, as well as avoiding the 2,000 miles of dangerous Atlantic coast.

In discussion of the matter of navigation to north Brazil, it is well to note that the much-talked-of International Railway and the Panama Canal are not to be considered, the Amazon and tributaries depending entirely on water transportation.

In talking the matter over with the Pernambuco merchant, he agreed that Pernambuco and points in south Brazil, being nearest to Europe and on the route of the several lines, were amply provided for.

The merchant surprised me by the information, substantiated by correspondence of an official character, to the effect that a railway greater in conception than our international proposition was being organized to unite Europe and South America in a five days' voyage, as outlined by following excerpt:

EUROPEAN, AFRICAN, AND SOUTH AMERICAN INTERNATIONAL RAILWAY.

[Translation from Frankfurter Zeitung.]

The Ibero-Afro-American Railway, as proposed, will run along the western coast of Africa from the Straits of Gibraltar to Goree-Dakar, or Bathurst—that is, to the point which is nearest South America.

The maps will show the crossing from Goree-Dakar, or Bathurst, to Pernambuco occupies only three days on the quietest part of the Atlantic Ocean, always free from fog and ice.

The crossing from Gibraltar to Africa, about 10 miles, can be made in less than half an hour, and cars will probably be ferried across to avoid transshipment.

The building of the projected railway will reduce the journey from Europe to South America to five days.

The total expense of building the road is estimated at $135,000,000. Preliminary surveying of the proposed route will require $380 per kilometer.

The distance from Gibraltar to Goree-Dakar is 1,740 miles.

As the line will follow the coast, work can be commenced at several places at the same time.

Cost of right of way will be insignificant.

Labor will be cheap, it is believed. Material and supplies for laborers will be expensive items, as also a fresh-water supply along the line; otherwise there are practically no natural difficulties to contend with.

In addition to the great impetus given to European-South American relations by the new railway, it will open up Morocco as well as French and English colonies in western Africa, besides considerably reducing the distances to the Kongo and South Africa.

The paper says editorially: "While Germany is not as directly interested in the project as Spain, France, and England, the railway would materially assist her in developing her African colonies and facilitate her growing commerce with South America."

The project of an Ibero-Afro-American Railway is being pushed by a Spanish committee, after having been brought up by the Spanish representative at the Algeciras conference.

In order to make the proposed railway clearly international in its character and avoid conflicts between interested powers, the committee has suggested that the Swiss Government take the initiative of calling a conference to study the subject and eventually lead to the organization of an international company to undertake the building of the road.

INTERNATIONAL RAILWAYS.

The proposed "Ibero-Afro-American" railway is to be constructed along nearly 2,000 miles of the west African coast to reach the narrowest point of the Atlantic, a distance of 1,632 nautical miles, where a three days' ferriage puts them on the South American coast at Pernambuco, from whence it is yet a five days' journey to Para on the Amazon or to Rio de Janeiro, in the south of Brazil. A possible railway along the Brazilian coast, which is planned from Para to Rio, would scarcely facilitate traffic from Pernambuco.

On the other side of the two American continents is planned the great International Railway, connecting North and South America, by a line laid principally along the west coast of South America, which

A HACIENDA OR FAZENDA, THE HOME OF WEALTHY AND CULTURED BRAZILIEROS.

will in nowise benefit Amazonia or north Brazil, which has the benefit of free water transportation, as previously mentioned.

I beg leave to repeat the proposition relating to competition between water and rail—that as long as an ounce of coal can shove a ton of cargo a mile on the ocean and beat the railroad in speed, the railroads need not apply.

The movement agitated in my consular reports of uniting the Amazon and Mississippi Rivers and Valleys by direct steamship communication between the ports of Para and New Orleans seems to have awakened interest in the Mississippi Valley and in Brazil, a corporation having been formed to operate the service between the Gulf and Brazilian ports, including Para. It is to be hoped this new American Braziliero Co. will profit by the experience of the former company, who made the mistake of attempting to cover all of Brazil instead of confining their efforts to north Brazil and the Amazon, as the Booth Line does.

THE KEY TO THE SITUATION.

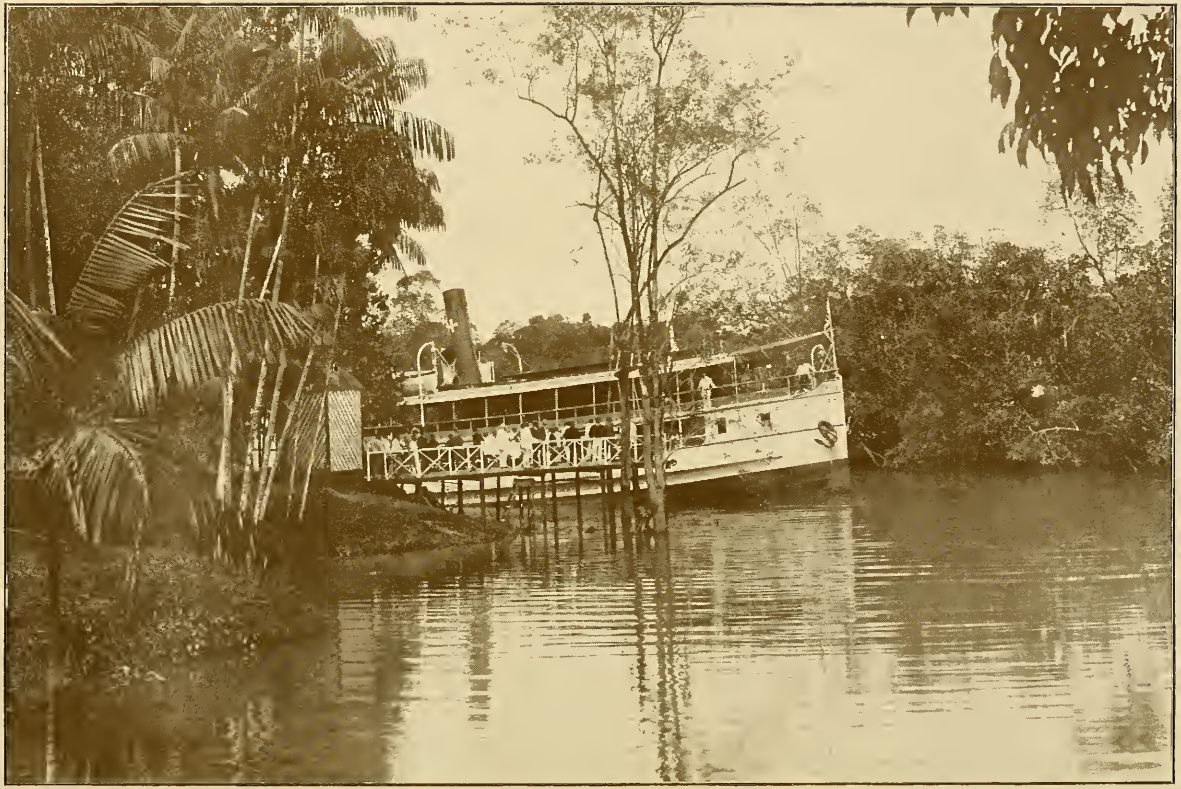
As the ships sail the distance from New York and New Orleans to Para is about the same, the advantage of the southern port consisting in the avoidance of the stormy and dangerous North Atlantic coast, coupled with the crossing of the Gulf Stream and rounding of Hatteras. There are other considerations favorable to New Orleans, principally in the roomy wharfage with railway connections on the levee or docks for miles up and down the Mississippi, in place of the congested and expensive dock facilities of New York.

The time between the Amazon and Mississippi may be shortened for passenger traffic four to six days by an arrangement for the steamers laden with cargo to call for passengers at Key West, who may have come by Pullman car direct to the deep-water docks of that port.

Another advantage of this suggestion arises from the convenience of steamers to South America in affording opportunity of traveling from Habana to the island of Barbados, as well as to all points in South America, instead of being compelled to go to New York to obtain passage south.

A modern steamer capable of doing 15 miles an hour would shorten the time almost one-half and afford a delightful sail through the historic islands for pleasure as well as for business. The island of Barbados, known as one of the principal coaling stations between North and South America, is in the direct path, and will afford a desirable opening for American coal in barges from the Mississippi.

Another advantage is that the New Orleans steamers to the Amazon will be able to obtain a return cargo, principally of rubber, which is a most valuable product, of which the United States consumes nearly a hundred million dollars worth annually.



AN ISLAND ON THE AMAZON.

Though the Amazon proper is from six to forty miles wide, with an average depth of 100 feet, the islands are frequently so numerous that the mainland is not visible. The channels and cut-offs are in many places so narrow that steamers from an opposite direction can scarcely pass.

In addition to rubber, there are nuts, hides, cocoa, dyewoods, hardwoods, and valuable timber, which may be had for the "catching," all of which are required in the Northwest of the United States.

In view of the recent exploitation of the rubber industry I venture to repeat the prediction made in my consular report "That gold grows on the trees in Amazonia."

Imagination—and not very exuberant imagination at that—can see a world power in Brazil, in the distant Aiden.

Just as the Amazon is the greatest river in the world, its valleys will some day be the seat of one of the greatest empires of the world.

AMAZONAS THEATER, MANAOS, BRAZIL.

This splendid structure is situated 1,000 miles up the Amazon. The entrance and supporting pillars are finished in white marble, the interior is richly decorated, and the allegorical paintings that ornament the ceilings of the foyer and auditorium are the work of the celebrated Italian artist, De Angelis. The cost of the edifice, which, viewed from the harbor is one of the most conspicuous features of the landscape, was $2,000,000 gold.

The Ganges and the Nile are of the historic past; the Danube, the Volga, and the Mississippi are of the present; the Amazon, the Orinoco, and the Kongo belong to the future.

In all the world there is no valley so riotous in fertility as that which the Amazon waters, and suitable population, aided by modern machinery and appliances, will in time blaze the pathway for civilization in the forest of that portion of South America known as Amazonia.

TECHNICAL SCHOOLS OF LIMA, PERU[1]

IN addition to the capital, Peru has three important centers of higher and professional education, viz, Trujillo for the north coast, Arequipa for the south country, and Cuzco for the southeast interior region. Naturally the most influential center, both in number of students and in the variety of schools, is at Lima. Here are located the major University of San Marcos, with approximately 900 students, two-thirds of whom are in the departments of medicine and law; two normal schools, one for men, the other for women, with 180 students; the engineering school with 182 students; the agricultural school with 90 students, 65 in the four-year course and 25 in the two-year practical school; the trades school, numbering about 200 in all its departments; and the Central Theological Seminary, established only last year and to which will come for the last years of study students from all the diocesan seminaries of the Republic. At present 45 students are enrolled, but when the classes are all in operation the number will exceed 200, and the institution promises to be of immense service to the country in raising the standard of philosophical and theological instruction. In all the higher and professional schools of the capital there are therefore nearly 1,600 students, and if to these are added the number in the three other centers it will be seen that in a total population of less than 5,000,000 the proportion of the student population is relatively high, considering racial, social, and economic conditions.

For the economic progress of the country the three technical schools are of prime importance and to them the Republic must look for the skilled men to manage the ever-increasing industrial enterprises. Unfortunately the trades school (artes y oficios), which should constitute the basis of industrial training, has been diverted from its original purpose, and under its last director has been administered more as an engineering school. The courses in theory have been multiplied and expanded to the neglect of practical training. The Government has called a halt in this procedure and proposes to reestablish the school on its original basis and make it subservient to the ends for which it was designed. The institution has a magnificent site on the outskirts of the city, facing the Avenida Gran and almost in front of the new medical college. To the rear can be seen the entire plain that stretches from Lima to the sea. The front of the building is two stories in height, containing on the first floor offices, classrooms, and laboratories, and on the second dormitories to accommodate 100 men. Around the large patio are one-story buildings containing other laboratories, shops, classrooms, infirmary, dining hall, and kitchens. All rooms are well furnished for their respective uses. The physical and electrical laboratories are well equiped and the iron and wood workshops have more than sufficient appliances, tools, and machinery for practical purposes. In one wing of the building is a large printing establishment for instructions in that trade. A dozen journeymen printers are regularly employed and much Government printing is done here.

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[1] Edgar Ewing Brandon.

SCHOOL OF ARTS AND TRADES AT LIMA, PERU.

The institution occupies a magnificent site on the outskirts of the city and is housed in a spacious two-story building. The first story contains the administration offices, classrooms, and laboratories; the second story is devoted to dormitories accommodating 100 men.

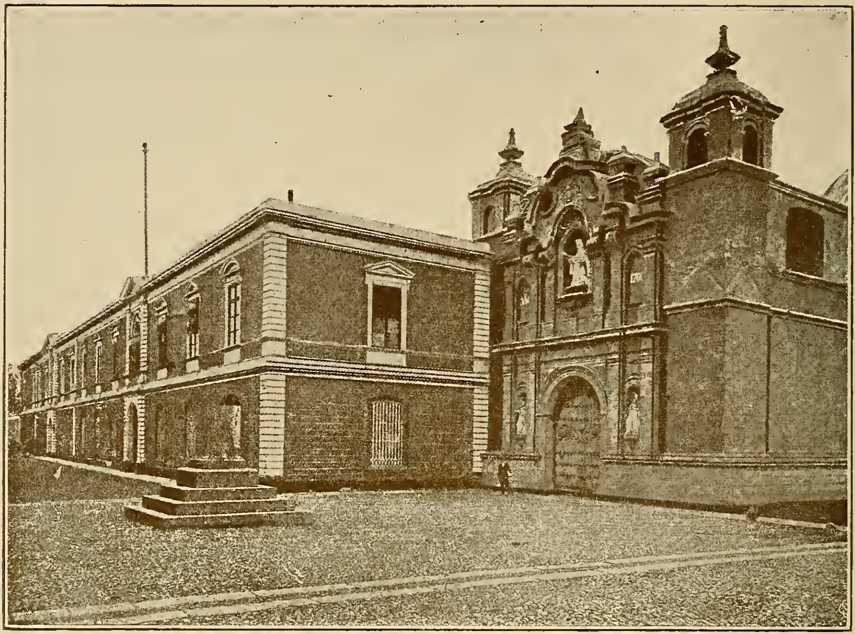
Pupils are admitted on graduation from the elementary schools and the course of study begins with one year of preparatory studies common to all, embracing arithmetic, algebra, plane geometry, free-hand and mechanical drawing, history, geography, civics, and handwork. Following this comes four years of technical studies, some obligatory for all, others required in special lines only. The course is too extensive considering the type of school and character of the students. It was not designed to be a manual-training high school preparatory to the engineering college, but a complete unit in itself for the preparation of skilled mechanics and foremen. A three-year course, including the preparatory year, would meet the situation more nearly and reduce the running expenses one-half. The reform now in progress contemplates such a change and with added emphasis on the practical work, and with closer supervision, will increase the efficiency of the admirable plant and place the school on the plane where it can be of most service to the country.

The engineering college is located near the center of Lima and occupies half a block. The building is of two stories with two interior courts. Around the court of honor are situated the administrative offices, classrooms, library, museums, and around the rear court are found the laboratories and shops. The director, Sr. Michel Fort, is of a distinguished Peruvian family, and engineer of extensive training and experience, and possesses rare executive ability. The faculty is composed entirely of graduate engineers, practically all alumni of the college. In addition to teaching they all practice their profession. The directors of the several laboratories and shops give their entire time to the work of the school. The course of instruction covers four years and is almost exclusively technical. Students must have completed satisfactorily the four years of secondary education before entering. Four courses are offered: Civil, mechanical, mining, and electrical engineering. The director is himself professor of mineralogy, and the laboratory of this department is a model of completeness. Assays are made not only for purposes of instruction, but for the Government and for corporations and individuals. Considering the importance of the mining industry in Peru, it was to be expected that this department would receive particular development. But the others are not neglected. The necessity of irrigation in all the coast region and the near interior calls for an ever-increasing number of civil engineers, and this course is likewise in much demand at present. The course in mechanical engineering is necessarily in Peru closely allied to mining, but in addition the large sugar interests call for men to meet their needs. A well-equipped mechanical engineer is a prime necessity on an isolated sugar estate and this line of engineers find ready employment. Courses are given also in architecture. A magnificent equipment in electricity has just been installed at a cost of $30,000 gold. A general elementary course in electricity is required of all students, but advanced laboratory instruction has not been possible until 1911. The new installation will enable the school to train thorough electrical engineers.

In the last two years of the various courses students are required to do during vacation actual work in the field or mines under the guidance of a professor and make formal report thereon. Two or three weeks are devoted to this vacation work and much stress is laid upon it. The plan is but a part of the general system of practical training, that is the keystone of the institution under the direction of Sr. Fort. To this he adds a close supervision over the work and laboratory standing of the students. This system, joined with the admirable facilities in laboratory and library now possessed by the institution, will make the college of the first grade and a power for the development of Peru by Peruvians.

As early as 1853 the Government conceived the idea of agricultural instruction, but nothing was actually undertaken until 1874, when land was secured that comprises the nucleus of the large domain of 250 hectares now owned by the State and devoted to practical and theoretical instruction in agriculture. It would be difficult to imagine a more ideal location than that enjoyed by the present National Agricultural School. Situated about 2 miles from Lima toward the southwest in a plain sloping gently toward the sea, receiving abundant water from the Rimac through irrigating ditches, it is a paradise of semitropical vegetation. Two avenues lead from the city to the farm, and it is planned to continue them to the town of Miraflores that lies between the farm and the sea, with a loop at the farther end. A very careful and artistic plan of roadways has been drawn, and when the work is complete it will make an agricultural park, which will be but the extension of the present zoological gardens. The school now comprises besides the main building and the adjacent biological laboratory three isolated laboratories for experimental work in sugar, arboriculture and viniculture, a meteorological station, a poultry house, a former hacienda, the center of the practical farm, and the director's house. In the main building, built in the form of an H, are situated the offices, classrooms, laboratories, and dormitories. The furnishings and laboratory equipment are good and sufficient. The technical library is small but practical. The present organization of the school dates from 1901, when a group of agronomic engineers was brought from Belgium and put in charge. Since that time the administration has continued in the hands of Belgians, but at present much of the practical work and some of the teaching is done by Peruvians. In 1911, 65 students were following the regular course of four years leading to the diploma or agronomic engineer, and 25 were enrolled in the two-year course of practical farming. The graduates are eagerly sought by the proprietors of large cotton, rice, and sugar estates. The record of the alumni is one to be proud of, as nearly all have succeeded to positions of influence and pecuniary profit.

A large part of the work of the school is experimental, and it is a question whether both the teaching and the experimentation might not be still better done if they were completely separated. It is the old question of the difference between the teacher and the investigator. Of two men of equal ability one may be more efficient in one profession and the other in the other calling. At Lima, where so little comparatively has yet been done in spite of the active work of the school toward securing accurate scientific data, the call for the investigator is strong. The agricultural interests of the whole country are asking for data, and the staple crops are so varied that the school can not keep pace with the demand for scientific information. Many pamphlets have been published during the last 10 years by members of the staff and others translated into Spanish giving the results of similar investigating abroad. In Peru the great variety of soils and the necessity of irrigation, which introduces the other element of variety and amount of water used, makes agricultural experimentation a complicated problem.



UNIVERSITY OF SAN MARCOS, LIMA, PERU.

In addition to the central college at Lima, the Government maintains practical agricultural schools at Huancayo, Cuzco, and Chachajroyas, and in each of the 22 high schools for boys there is given instruction in elementary agriculture.

BRAZIL AT THE HYGIENIC EXPOSITION, DRESDEN ∴

THE BULLETIN is in receipt of an account and description of the Brazilian exhibit at the International Hygienic Exposition held in Dresden, Germany, May to October, 1911.

From the account it will be noted that Brazil's exhibit was largely confined to the results of scientific investigation of diseases peculiar to the Tropics. The promoters of the exposition had signified in their prospectus that it was their purpose to have the various exhibits from each country illustrate the hygienic researches and the results thereof in that particular country, and the splendid exhibit of Brazil, showing the wonderful work accomplished by her physicians and scientists, is such that all America should take pride in the prominent position she holds in the scientific world and applaud her energy and enterprise in demonstrating the fact upon this occasion.

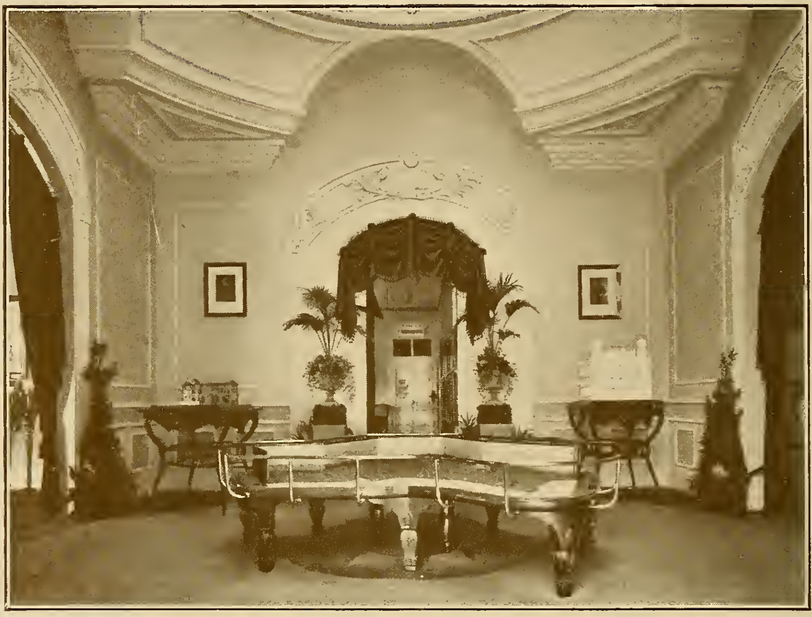
THE BRAZILIAN EXHIBIT AT THE INTERNATIONAL HYGIENIC EXPOSITION, DRESDEN.

In this pavilion Brazil exhibited the splendid results attained by her physicians and scientists in their investigations on tropical diseases.

With the exception of the elimination of some of the most technical passages, of interest only to the physician and scientist, we herewith give a free translation of the German account.

The Brazilian exhibit in Dresden relates only to the purely scientific features of hygiene. Upon entering the pavilion, in a rich dome-like room, is seen a large model of the grounds and buildings of the Oswaldo Cruz Institute for Experimental Pathology and Serum-therapeutics, which is located at Manguinhas, near Rio de Janeiro. In the two corners of the room are larger models of the main building of the institute and the public board of health building in Rio.

In a room immediately to the left we note a large number of anatomical preparations and specimens in gelatine which relate to various diseases, such as plague, yellow fever, ankylostomiasis, amœbic dysentery, malaria, etc. In glass cases are shown collections of Brazilian mosquitos, gadflies, and ticks, a large number of cultures of fungi pathogenic for men and animals, etc., while a large wall is filled with specimens, casts, and illustrations of the Chagas disease, *Thyreoiditis parasitavia,* which was discovered about two years ago by Dr. Carlos Chagas, division chief of the Oswaldo Cruz Institute, in a small district in the interior, and exhaustively investigated by him since then. This disease is caused by a germ discovered by the doctor, called *Schizotrypanum cruzi*, which is transmitted by a wood chinch. There are also shown plaster casts of goiters in various states of development, photographs of acute and chronic cases among adults and children, specimens of diseased organs, and a wall picture illustrating



MODELS OF THE SCIENTIFIC INSTITUTIONS OF BRAZIL.

In one of the rooms of the Brazilian exhibit is a large relief model of the grounds and buildings of the Oswaldo Cruz Institute at Manguinhas, near Rio de Janeiro. The white model in one corner of the room represents the main building of the Cruz Institute, and the other model is of the public board of health building at Rio.

the development of the *Schizotrypanum* in vertebrate animals and insects.

In the opposite room we find numerous microscopic preparations of the Chagas disease, living *Schizotrypani* in the blood of porpoises, cuts from the heart, lungs, liver, and muscles, with colored organisms, also specimens of variola, anhum, blastomyces, etc. In cases are also samples of the various sera and vaccines prepared by the institute and plaster casts of Leischmaniosis, Yaws, etc.

In a fourth compartment is demonstrated how the yellow fever was conquered throughout almost the whole of Brazil through isolation of the patient and the destruction of the germ-carrying mosquito—the *Stegomyia calopus* (*fasciata*). We see here a collection of the material used for fumigating houses and disinfecting drains, killing the mosquito larvæ, etc.; a large model of two isolation rooms with mosquito-proof screened hall, etc., many small models, statistics relative to the decrease and final extinction of yellow fever in Rio and Para, on the general decrease of all infectious diseases in Rio, models and pictures of the Clayton apparatus for developing sulphurous gases in drains and ships, the apparatus of Genest-Henscher for formal and sulphur, etc.

The systematic eradication of yellow fever was started in Para in March, 1910, and for five months there has not been a single new case.

The next two rooms are devoted to the special exhibit of the State of Sao Paulo, in which the State public health bureau and the Serum Therapeutic Institute of Butanto participate. From the latter are shown graphic pictures showing the first appearance and the final extinction of yellow fever in the cities of Campinas and Santos, where there have been no cases of the disease since 1904. After the fact that the *Stegomyia calopus* was really the carrier of the disease had been established by repeated experiments of the North American physicians, although the germ of the disease is still unknown, methodical measures were taken against it, especially through isolation of each patient, and that with the best results, so that even the formerly severely visited city of Santos has for years been thoroughly sanitated.

In addition are also shown specimens of milk pox, views of the isolation hospitals of Sao Paulo and Santos, the buildings of the public health department, the Maternité, the Bacteriological Institute, the Disinfection Bureau, the Chemical Laboratory, and the Vaccination Institute.

The division of the State Serum Therapeutic Institute contains tabulated views of all species of snakes known in America and especially of those of Brazil; the investigations of their poisons, the specifically neutralizing effects of snake sera; statistics relative to accidents occasioned by snake bites, which are much less frequent than is commonly thought; collections of dead Brazilian snakes; stick with sling attachment for catching the reptiles; cases for transporting them; show cases containing various products of the institute; serum anticrotalicum—against the poison of rattlesnakes; plague serum and vaccine; diphtheretic and tetanus antitoxin; poisons and poisonous fangs of reptiles; views of the old and the new buildings, etc.

In the beautiful and spacious kinematographic room of the Brazilian pavilion are given lectures of an hour's duration four times a day, on the methods for fighting yellow fever, disinfection of houses and drains, destruction of mosquitoes and their larvæ, isolation of patients, the catching of snakes and the extraction of their poisons, on the snake park and on the harmless but useful *Mussurana* snake, which, being immune to the poison of the other snakes, wages successful war on them, killing them by means of quick and skillful constrictions and then swallowing them.

MICROSCOPIC PREPARATIONS AT THE BRAZILIAN EXHIBIT.

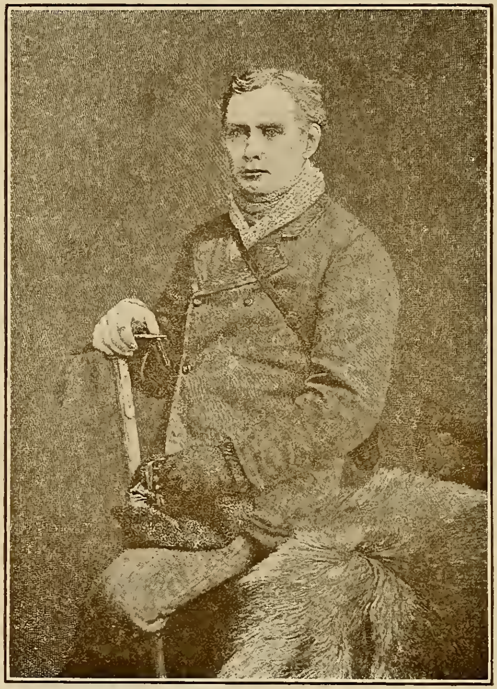
In the rooms devoted to the display of research and investigation conducted by Brazilian scientists are microscopic preparations of the Chagas disease, blastomyces, anatomical specimens in gelatine relating to tropical diseases, particularly plague, yellow fever, malaria, etc., and collections of tropical infectious insects.

The Brazilian pavilion is being crowded by visitors composed of the general public as well as the more learned scientists and two physicians of the commission are in attendance for the purpose of guidance and instruction.

EDWARD WHYMPER AND THE HIGH ANDES

EDWARD WHYMPER, artist, explorer, and above all, mountaineer, is dead. He died at Chamonix on September 15 last in his 72d year.

Inasmuch as his greatest contributions to science in the way of discoveries of new genera in entymology, new species and varieties in natural history, collections of specimens relating to ethnology, establishment of previously unknown facts relative to air pressures in great altitudes, accurate determination of the altitudes of the greatest peaks of the equatorial Andes—the summits of some of which he was the first to reach—in short, because the greatest work of his life was accomplished in South America, we deem it but fitting that THE BULLETIN should publish a short biographical sketch, and also a brief review of the book which brought him the coveted honor of the "Patron's gold medal" from the Royal Geographical Society, "Travels Amongst the Great Andes of the Equator."



EDWARD WHYMPER.

Mr. Whymper's achievements in mountaineering and his valuable work in scientific research had been recognized by many learned societies in both hemispheres. He was a Fellow of the Royal Society of Edinburgh; Fellow and Patron's Medallist of the Royal Geographical Society; honorary member of the Geographical Society of Paris; of French, Swiss, and Italian Alpine Clubs; of the Sierra, Appalachian, Canadian, Rocky Mountain, and various New York Clubs; Knight of the Order of St. Maurice and St. Lazare. He died September 15, 1911.

Edward Whymper was born in London April 27, 1840. He was the son of an artist, and by the time he had reached his 20th year had become a very skillful wood engraver. In 1860 he was commissioned by a London publisher to make a series of sketches of Alpine scenery, and he undertook an extensive journey through the central and western Alps. It was probably this commission which determined his future career by developing his latent passion for exploration and mountain climbing. Even upon this first journey he accomplished some remarkable feats of climbing, he and members of his party being the first to scale the summits of several of the highest of the French Alps, notably among them being the Pointe des Ecrins, considered the most remarkable feat of mountaineering recorded up to that time. The greatest feat of his earlier years, however, was not attained until repeated efforts, extending over a period of five years, had resulted in failure. This was the conquest of the Matterhorn.

Up to the year 1865 the belief prevailed that the summit of the Matterhorn was absolutely inaccessible to man. On the 14th of July of that year Mr. Whymper proved the contrary, but the event was attended by a tragedy that came very near to putting an end to his own adventurous career. The ascending party consisted of Mr. Whymper, three other English gentlemen, and three Swiss guides. Their efforts were crowned with success and they attained the summit, but upon their return on the descent the connecting rope of the climbers suddenly parted and the three Englishmen with one of the guides fell into a chasm thousands of feet deep, leaving Whymper and the two other guides clinging to the rocks. His book "Scrambles Amongst the Alps"—published in 1871—contains most vivid and graphic descriptions of his attempts on the Matterhorn and particularly of the tragic sequel of the final success.

In 1867 he undertook an expedition to Greenland, which resulted in important collections of fossil plants which are now in the geological collection of the British Museum.

It was not until the latter part of the year 1879 that Mr. Whymper fitted out the expedition that is of the most interest to Americans. It had long been a mooted question whether human life could be sustained at great altitudes above the level of the sea in such a manner as would permit of the accomplishment of useful work. It was primarily to gather facts and data to determine this question, and incidentally to gather material relative to vegetable and animal life at such high altitudes, that this expedition was undertaken.

In his introduction to "Travels Amongst the Great Andes of the Equator" Mr. Whymper discusses the evidence as to the effects of extremely high altitudes on the human organism offered by many explorers, summarizing as follows:

> This evidence has come from all parts of the world, and has accumulated during several centuries. It has been afforded, independently, by multitudes of persons of diverse conditions, by cultured men of science down to illiterate peasants, the latter of whom can not have heard of experiences beyond their own, and although the testimony often differs in detail, it agrees in the general leading features. Nausea and vomiting, headaches of most severe character, feverishness, hemorrhages, lassitude, depression, and weakness, and an indescribable feeling of illness have been repeatedly mentioned as occurring at great elevations, and have only been cured by descending into lower zones. To these maladies the term mountain sickness is now commonly applied.

Continuing, as to the purpose of his expedition he says:

> As the main object of the journey was to observe the effects of low pressure and to attain the greatest possible height in order to experience it, Chimborazo naturally claimed the first attention, on account of its absolute elevation above the sea, and I proposed to encamp upon this mountain at gradually increasing heights, with the ultimate aim of reaching the summit. But as there was no certainty that this could be done, and a possibility, at least, that the results of the investigations might be of a negative character, various other objects were kept in view, principal among them being the determination of the altitudes and of the relative positions of the chief mountains of Ecuador, the comparison of boiling-point observations and of aneroids against the mercurial barometer, and collecting in botany and zoology at great heights. I concerned myself neither with commerce or politics, nor with the natives and their ways, and there are, besides, many interesting topics which might be dwelt upon that find no place in this volume.

The following rather quaint conclusion of this introduction is worthy of quotation:

> We traveled through Ecuador unarmed, except with passports which were never exhibited, and with a number of letters of introduction which were for the most part not presented; adopting a policy of nonintervention in all that did not concern us, and rigidly respecting the customs of the country, traversing that Republic without molestation, trusting more to our wits than to our credentials, and believing that a jest may conquer where force will fail, that a bon mot is often better than a passport.

The expense of the expedition being borne by Mr. Whymper alone, his staff was necessarily on a modest scale and he took with him as aids two of his former Alpine guides, Jean-Antoine Carel, and his cousin, Louis Carel, with the intention of picking up a third man in Ecuador.

With the two Carels and his supplies he landed at Guayaquil December 9, 1879. After having completed arrangements for the transportation of his supplies, he left this city for Bodegas on the 13th, arrived there the next day, and started immediately with his caravan of three aids, numerous arrieros (muleteers) and pack mules for Guaranda, the little town which he proposed to make the base of operations in his attack on Chimborazo. Although crossing intervening mountains and but a few miles distant, he had not been able to catch even a glimpse of the great peak on account of the mists and clouds. It was not until December 21 that, standing on an elevation near Guaranda with his instruments in readiness, he obtained his first unobstructed view, and here is his comment:

> Two things instantly arrested attention. One of these was that Chimborazo had two summits—twin, snowy domes—apparently equally elevated. The other was that the whole of that part of the mountain which was seen from Guaranda was nearly covered with glaciers.
>
> All the writers who have referred to Chimborazo from personal knowledge, notably Humboldt and Boussingault, have spoken of the "summit," never of summits; and in a well-known passage in Asie Centrale, which has been embodied in many geographical works, Humboldt expressly declares that he saw no glaciers in Ecuador.

MOUNT CHIMBORAZO, ECUADOR.

The summit of this magnificent mountain, the highest of the Ecuadorean Andes, was scaled for the first time by Edward Whymper and two companions on January 4, 1880. According to his calculations the summit is 20,608 feet above the level of the sea.

"I have seen nothing in the Tropics," he says, "neither in Quito (meaning the vice royalty of Quito, embracing the whole of Ecuador) nor in Mexico, resembling the Swiss glaciers;" and he quotes a confirmatory passage from Boussingault, in which the latter says that he is only acquainted with one glacier in Ecuador, upon the mountain Tunguragua—"c'est le seul glacier que j'aie vu en Amérique entre les tropiques." Yet I saw Chimborazo crowned by glacier, and streaming with glaciers. They departed in all directions from a plateau on the top, almost covering the mountain."

Of course his object was to ascend the higher of the two peaks, and it became necessary to use the theodolite to determine that the western summit was the higher of the two. The two Carels were then sent on a reconnoitering expedition to select the easiest route, and returned on December 23, having reached a height of about 16,450 feet and selected the location for the first camp at the base of the mountain. The arrieros refusing to leave before the day after Christmas, it was on the morning of the 26th that the train, consisting of the explorer, his 3 aides, 3 arrieros, 2 Indians, and 14 animals—10 for baggage and 4 for riding—left the town for the mountain.

They camped at the mouth of a vallon leading directly toward the western summit, and the next morning found that the Indians, accompanied by five of the mules, had gone. This necessitated two trips for moving to the next and higher camp, but this was accomplished by 5.30 in the afternoon. This camp was at an elevation of 16,640 feet, and it was here that Mr. Whymper had his first experience with mountain sickness. He had noticed that the animals seemed to show signs of distress after reaching a height of 16,000 feet, and that by the time camp was reached they were completely spent, but—

We were all in high spirits. The weather had been fine and the move had been successfully effected. It was arranged that one of the arrieros should sleep at Tortorillas and come up daily to learn what was needed, and all the rest of the troop was sent back to Guaranda. They left us very gladly, for although we had succeeded in establishing our camp at the selected spot, it had only been done by great exertions on the part of my people and their beasts. The mules were forced up to the last yard they could go, and staggering under their burdens (which were scarcely more than half the weight they were accustomed to carry) stopped repeatedly, and by their trembling, falling on their knees, and by their general behavior showed that they had been driven to the verge of exhaustion. When we others arrived at the second camp, we ourselves were in good condition, which was to be expected, as we had ridden most of the way, but in about an hour I found myself lying on my back along with both the Carels, placed hors de combat, and incapable of making the least exertion. We knew that the enemy was upon us and that we were experiencing our first attack of mountain sickness.

We were feverish, had intense headaches, and were unable to satisfy our desire for air except by breathing with open mouths. This naturally parched the throat and produced a craving for drink, which we were unable to satisfy, partly from the difficulty of obtaining it and partly from trouble in swallowing it. When we got enough, we could only sip, and not to save our lives could we have taken a quarter of a pint at a draft. Before a mouthful was down we were obliged to breathe and gasp again, until our throats were dry as ever. Besides having our normal rate of breathing largely accelerated, we found it impossible to sustain life without every now and

> then giving spasmodic gulps, just like fishes when taken out of water. Of course there was no inclination to eat, but we wished to smoke, and found that our pipes almost refused to burn, for they, like ourselves, wanted more oxygen.
>
> This condition of affairs lasted all night and all the next day, and then I managed to pluck up spirit enough to get out some chlorate of potash, which, by the advice of Dr. Marcet, had been brought in case of need * * *. Ten grains to a wineglass of water he recommended, the dose to be repeated every two or three hours, if necessary. It appeared to me to operate beneficially, though it must be admitted that it was not easy to determine, as one might have recovered just as well without taking it at all. At all events, after taking it the intensity of the symptoms diminished, there were fewer gaspings, and in some degree a feeling of relief.

This attack coming on at an elevation of less than 17,000 feet and its suddenness seems to have astonished Mr. Whymper not a little. He comments at some length upon the further symptoms and effects, which, however, gradually disappeared in two days as to the Carels, who on the 29th set out exploring by themselves and reached an altitude of about 19,300 feet. On the 31st a third camp was established at a height of 17,285 feet, and by January 2 three weeks' provisions had been transported to it. The attempt to gain the summit on the 3d was frustrated by a severe storm. The dangers, hardships, almost insuperable difficulties of this stage of the journey are graphically told by Mr. Whymper, and only the grim determination and dauntless courage of the hardened mountaineer could have conquered them.

The final dash for the summit was made on the 4th. They reached the plateau of the top, 20,000 feet above sea level, and saw the two summits before them. Here they struck a tract of exceedingly soft snow, which could only be traversed by flogging down every yard and then crawling over it on all fours. Progress was very slow and the danger increased. Frequently one or the other would be submerged and would be hauled out by the others with the rope. Mr. Whymper's description of the final situation shows the dramatic feature:

> When we had been at this sort of work for three hours, without having accomplished half the remaining distance, I halted the men, pointed out the gravity of our situation, and asked them which they preferred, to turn or to go on. They talked together in patois, and then Jean-Antoine said: "When you tell us to turn we will go back; until then we will go on." I said, "Go on," although by no means feeling sure that it would not be best to say "Go back." In another hour and a half we got to the foot of the western summit and as the slopes steepened the snow became firmer again. We arrived on the top of it about a quarter to 4 in the afternoon, and then had the mortification of finding that it was the lower of the two. There was no help for it; we had to descend to the plateau, to resume the flogging, wading, and floundering, and to make for the highest point, and there again, when we got onto the dome the snow was reasonably firm, and we arrived upon the summit of Chimborazo standing upright like men, instead of groveling, as we had been doing for the previous five hours, like beasts of the field.

According to Mr. Whymper's calculation made at this time the height of the summit of Chimborazo is 20,608 feet.

With great difficulty the three made their way back to the camp, arriving there about 9 o'clock at night, a night so dark that they could not see their feet and could only tell by touch whether they were walking on rock or snow. They had been constantly walking, climbing, crawling, and wading for 16 hours. But they were the first human beings to stand on the summit of one of the world's greatest mountains—Chimborazo.

Humboldt and Boussingault were both stopped at the foot of what Whymper calls the southern wall, a point according to the latter's calculation about 18,400 feet above the level of the sea.

Upon wishing to extend his stay upon the mountain, Whymper met with the unexpected opposition of the Carels. Both refused to again ascend to the summit, and even to stay at the highest camp. Whymper himself remained at the second camp alone for two days longer in order to complete his measurements and sketches. Upon his return to Guaranda he found that Louis Carel was a cripple, quite unable to walk, from having his feet severely frostbitten while on the recent dash to the top of the mountain. This accounted for the refusal of the cousins to try another ascent. Medical attention had to be secured, and the nearest physician being at Ambato, the party moved to that town. Weeks elapsed before Louis was again able to take an active part in the explorations. It was here that Whymper added some of the most important contributions to entomology and zoology gathered during the journey.

From Ambato they moved to Machachi, a place most convenient to the mountains of Illiniza, Corazon, Atacatzo, Pasochoa, and Ruminahui. The ascent of most of these peaks was but a repetition of the difficulties encountered on Chimborazo, except that they were not so great.

The next notable achievement was the ascent and camping over night near the edge of the crater of Cotopaxi. A twofold purpose led the explorer to this project: (1) To make another experiment on the effect of high altitudes as to mountain fever, etc., and (2) to have a nocturnal observation of the interior of the crater of the highest active volcano in the world.

Passing over the account of the ascent and their first view of the crater by daylight, we give Whymper's description of the scene at night:

> When night fairly set in we went up to view the interior of the crater. The atmosphere was cold and tranquil. We could hear the deadened roar of the steam blasts as they escaped from time to time. Our long rope had been fixed both to guide in the darkness and to lessen the chance of disturbing the equilibrium of the slope of ash. Grasping it, I made my way upward, prepared for something dramatic, for a strong glow on the under sides of the steam clouds showed that there was fire below. Crawling and groveling as the lip was approached, I bent eagerly forward to peer into the unknown, with Carel behind, gripping my legs.

The vapors no longer concealed any part of the vast crater, though they were there, drifting about as before. We saw an amphitheater 2,300 feet in diameter from north to south and 1,650 feet across from east to west, with a rugged and irregular crest, notched and cracked, surrounded by cliffs, by perpendicular and even overhanging precipices, mixed with steep slopes, some bearing snow and others apparently incrusted with sulphur. Cavernous recesses belched forth smoke, the sides of cracks and chasms no more than halfway down shone with ruddy light, and so it continued on all sides, right down to the bottom, precipice alternating with slope, and the fiery fissures becoming more numerous as the bottom was approached. At the bottom, probably 1,200 feet below us, and toward the center, there was a rudely circular spot about one-tenth the diameter of the crater, the pipe of the volcano, its channel of communication with the lower regions, filled with incandescent if not molten lava, glowing and burning, with flames traveling to and fro over its surface and scintillations scattering as from a wood fire, lighted by tongues of flickering flame which issued from the cracks in the surrounding slopes.

At intervals of about half an hour the volcano regularly blew off steam. It rose in jets with great violence from the bottom of the crater and boiled over the lip, continually enveloping us. The noise on these occasions resembled that which we hear when a large ocean steamer is blowing off steam. It appeared to be pure, and we saw nothing thrown out, yet in the morning the tent was almost black with matter which had been ejected.

PART OF THE EXTERIOR OF THE CRATER OF COTOPAXI, ECUADOR, THE HIGHEST ACTIVE VOLCANO IN THE WORLD.

Whymper was the first mountaineer to camp over night near the edge of this crater in order that he might observe the eruptions at night and at early daylight.

Thus was spent the night at an altitude of over 19,000 feet, an achievement unparalleled at that time.

His book is filled with similarly graphic accounts, humorous and quaint stories about the people he encountered, accounts of ludicrous mishaps and sometimes almost tragic experiences. His naïve discussions of Humboldt's figures on the altitudes reached and the speed attained show his genial humor, while his accounts of the collections of stone implements of the ancient inhabitants of Ecuador, the specimens of vegetable and animal life, his notations of the divergence of the aneroid from the mercurial barometers, his discussion of the effects of glaciers, etc., show his eminent qualifications as an explorer and scientist.

THE MADEIRA & MAMORE RAILWAY

PROGRESS is steady and secure on the Madeira & Mamore Railway. This line is almost in the center of Brazil, and it will ultimately offer fast and regular communication between the mouth of the Amazon River and the vast interior of the continent, especially the eastern slopes of the Bolivian and Peruvian Andes. (See BULLETINS for January, 1910, and March, 1911.)

The completed railway is to measure about 200 miles (about 322 kilometers) and runs from Porto Velho on the Madeira River to Villa Bella at the frontier of Bolivia and, under a recently decided extension, somewhat farther into that Republic. On September 7, 1911, the third section of the Madeira & Mamore was inaugurated and is, perhaps, the most important division in the entire system, because it reaches just to the door of Bolivia, and actually connects that part of South America, hitherto the most inaccessible part, with

INAUGURAL PARTY VIEWING NEW SECTION OF THE MADEIRA-MAMORE RAILWAY.

The completion of the third section of this remarkable railway was celebrated on September 7 and 8, 1911, with an elaborate banquet to the distinguished inaugural party who made the trip from Porto Velho to the completed section at Albuna. This new section now completes the line for a distance of 136 miles.

open navigation down the Madeira, the Amazon, and out upon the broad Atlantic.

This third section runs from kilometer 152 to kilometer 219 (say from mile 95 to mile 136), a distance of 67 kilometers (say 41 miles), but its value consists in the fact that it brings one of the richest sections of Brazil 30 days nearer the capital by rail and within a day by wire. It reaches the door of Bolivia at the mouth of the Abuna River, which is on the kilometer 219 point, and it saves 30 days' dangerous detour around some of the fiercest of the treacherous rapids. The traveler and the trader with his wares can now go comfortably in 10 hours, without risk, where formerly a month of untold hardships was considered a reasonable time to spend on the trip.

ONE OF THE LOCOMOTIVES USED IN AN EARLY ATTEMPT (1872) TO BUILD THE MADEIRA-MAMORE RAILROAD.

The inauguration was made a gala occasion and celebrated with unrestricted delight and pleasure by all those connected with the road. Fortunately for the BULLETIN it is able to quote a description of the holiday from its energetic contemporary the *Porto Velho Marconigram,* published at the headquarters of the railway. In itself this possibility deserves notice. Not so many years ago news from the interior of South America was considered fresh if it found its way to the States within six months, but this little paper was mailed from Manaos—up the Amazon—on October 2 and was delivered in

Washington October 21, only 19 days for the journey of over 4,000 miles, almost all the way by water.

"The town of Porto Velho," says the *Marconigram* of September 16, "had on her gala clothes last Thursday, September 7, 1911. The depot was beautifully decorated with graceful palms, while Brazilian and Bolivian flags floated gayly on the breeze. The coaches of the five-car, handsomely equipped special train were covered, inside and out, with the national colors of various nations. Promptly at 7.40 a. m., with whistles blowing and the people cheering, the train started, bearing away on the momentous journey the inaugural party of distinguished guests, composed of officials, prominent Manaos and Para newspaper men, officers of the railroad, and local residents.

FOURTH OF JULY AT THE FRONT.

Celebration of the Fourth of July by the Americans employed on the construction of the Madeira-Mamore Railway.

"The first stop was at Santo Antonio at 7.55, where a royal welcome was given. At 8.05 Santo Antonio was left behind," and with but few other stops on the way, at which photographs and moving pictures were taken of the train and party, the train, "on time to the second, pulled into Abuna at 4.15 p. m., with the shouts of the assembled crowd ringing in the ears of the passengers." This made a journey of 219 kilometers (136 miles) in 8 hours and 35 minutes, or at the rate of something over 25 kilometers (almost 16 miles) an hour. When it is remembered that all the track lies in the heart of the Tropics, that it has been only recently laid, and that this was the first scheduled train sent out, the record is truly remarkable.

At Abuna a banquet was given. "The table was set with 130 covers, and the feast was a royal one, well prepared and served. Toasts were drunk to Brazil, Bolivia, the United States, and to the Madeira & Mamore," but other lands or other factors in the construction work were not forgotten. "Songs were sung in Portuguese, Spanish, and English, and the greatest feeling of thorough friendliness prevailed throughout."

"On Friday a run from Abuna to rail head—that is, a distance of 42 kilometers (26 miles) to kilometer 262 (mile 168)—was made in the morning over track still under construction. This brought forth redoubled congratulations and words of praise. This run, totaling 84 kilometers (52 miles), required 6 hours, as all of the roadbed is not completed for rapid travel, and postponed the intended time of departure for the return trip to Porto Velho until 1.05 p. m., when the start was made that finished at 8.30 p. m., after traveling over 324 kilometers (210 miles) without the slightest accident or delay of any kind." Refreshments of various kinds were served from a special buffet car carried for that purpose, while an express car contained the already prepared dishes for the banquet on Thursday and the breakfast on Friday. The return trip was made in 7 hours and 25 minutes, noticeably faster, therefore, than the outward trip.

The earnest workers on the Madeira & Mamore Railway are to be congratulated. The officials of the company, who have so long and patiently kept at a task for which failure was more than once prophesied, as well as the Governments of Brazil and Bolivia are to be congratulated that the triumphant end of their ambitious labors are so near. When the railway is completed and open to international traffic, and the eastern slope of the Andes secures its dream of outlet direct to the shores of the Old World, the result upon the commerce of South America will be second only to that which must follow the opening of the Panama Canal. By such accomplishments as this engineering work just celebrated is history made.

THE INTERNATIONAL BUREAU OF AMERICAN STUDENTS

THE Second International Congress of American Students, which met in Buenos Aires in June, 1910, voted by acclamation to create an International Bureau of American Students. This office, it was finally decided, should be situated in Montevideo, as a well-merited token of the enthusiasm and energy of the student body there.

NEW BUILDING OF THE UNIVERSITY OF MONTEVIDEO, URUGUAY.

The Government of Uruguay is exerting its best efforts to make this institution one of the ranking schools in Latin America. The faculty is continually being increased by the appointment of leading educators to its ranks and the curriculum is enjoying a corresponding broadening in its scope. The student body, too, is a most active one and figures very prominently in the work of the Students' Union of Uruguay. The selection of Montevideo as the headquarters of the International Bureau of American Students is a result of the interest and enthusiasm displayed by this Students' Union in the movement to develop social and intellectual intercourse between the student bodies of America.

The purposes to be served by such an institution are of the greatest importance, and the ideals of the student union—active intellectual intercourse in many ways, and reciprocal exchange of ideas in respect to what constitutes the movement for progress among university men—are to be fostered as may best seem practicable. Fortunately the Students' Union of Uruguay, an organization already in existence, will take up the work, and it is intended that its plan shall be modeled upon that of the Pan American Union in Washington. The archives of the various congresses are to be preserved by the Students' Union, and with it will be kept also all documents and publications which associated bodies are obligated to send there. In Montevideo there will be what may be called a social center, a place where students may meet on common ground; it will set in motion a series of studies covering the various countries of America, and will become a source of information for such matters as relate to education.

This worthy organization is now eager to extend its associations even beyond the bounds originally intended and hopes, therefore, to be able to get into touch with similar bodies in the other Americas. Undoubtedly the student bodies in the United States, whether composed of a union of many colleges or restricted to members of one university or coordinated faculties, will look with hearty approval upon this friendly proposal to join hands with their fellow students in the other American Republics. The beginning has already been made. The Pan American Union is delighted to be of service in this movement and offers its aid to further, by any means in its power, the formation of what may result in a Pan American Students' Union, working together for the intellectual and social progress of the Western Hemisphere.

ADDRESS OF ASSISTANT DIRECTOR OF THE PAN AMERICAN UNION ∴ ∴

IN the editorial section of this issue of the BULLETIN, mention is made of the address which Mr. Francisco J. Yánes, the Assistant Director of the Pan American Union, delivered before the annual meeting of the directors of the International Institute for Girls in Spain, which was held in Boston on October 23, 1911. Below are quoted excerpts from the remarks of Mr. Yánes on that occasion:

I consider it a great privilege to be here at the invitation of the International Institute for Girls in Spain. This is one of the noblest and most useful organizations for the betterment of international relations, since it serves as a link between peoples whose intellectual force and progress, though different in their outward manifestations, are one in substance. I am aware that I owe the honor of addressing you to the fact that I am connected with the Pan American Union, of Washington, another institution which, in a broader field, strives to bring together the ideals of Anglo-Saxon America and those of Latin America by promoting a better understanding among the constituent nations; a widespread knowledge of needs that are common to all; a concerted, common effort toward a common goal. Our work has but one aim, and that is to develop a closer friendship, a community of interests, financial and commercial, on behalf of civilization, international brotherhood, and peace. The Pan American Union is a live example of the honest desire and the necessity of the countries of this hemisphere to apply, in the individual development of each, the results and experience of the others. The mission of the Pan American Union is in a large measure educational. It is this phase of our work that brings us into sympathetic relation with the work of the International Institute for Girls in Spain, so ably, so successfully conducted as to deserve the greatest praise and recognition.

After reviewing the work done in Spain by Mrs. Alice Gordon Gulick and her husband in the creation and maintenance of the institute, in spite of many difficulties, finally overcome by the tact and gentleness of Mrs. Gulick, Mr. Yánes said:

In view of the success attained in Spain by the International Institute, and in the interest of Pan American ideals, I do not hesitate to urge the directors and those in office or in close touch with the organization to turn their eyes to another rich field at our doors and try to establish in all the capitals of Latin America a similar institute for the education of the Latin American woman. * * * The experience gained in Spain and in Porto Rico would serve to secure excellent results in Spanish America. In 18 of the 21 Republics in this hemisphere, our ancestors were Spaniards, our tongue is the Spanish language, our customs and manners have all been inherited from the conquerors and settlers, and they are still the chief characteristics of our peoples, with such modifications as time and progress have brought about. * * * I have suggested the idea of extending the work of the International Institute to Latin America,

Photograph by Harris-Ewing.

FRANCISCO J. YÁNES

Assistant Director of the Pan American Union because as a Latin American I wish to see our girls—the girls of whom we are so proud—benefited by the practical education taught by such a powerful agent in civilization as your institution.

The lack of knowledge on the part of the generality of people in the United States of the true character of the Latin American woman, and the corresponding ignorance in Latin America of the real characteristics of the American woman, were then discussed, pointing out the main reasons why these wrong ideas prevail, and stating in conclusion:

A strictly nonsectarian school in each of the capitals of Latin America, based upon the same principles as the International Institute for Girls in Spain, and conducted by the same able directors and teachers who have attained such splendid success in Madrid, is, I venture to say, a pressing need, as its influence will serve to counteract the ill effects that ignorance and prejudice have caused in many cases. This is the work that your organization should undertake in Latin America, because of its influence as a factor in peace and good will, and because the time has come when Americans must dispel the erroneous ideas entertained in Latin America, by the majority of people, as to the real civilizing influence of the North Americans. This does not mean that we lack educational institutions for girls in Latin America. There is not a capital that can not show two or more splendid schools and colleges for girls, where not only those accomplishments are taught which are a sort of frame to set off woman's grace and loveliness, but also a practical, useful, sensible education is gained, whereby a new field is opened to our women. * * * In conclusion, allow me to quote from the report of Miss Borden at the last annual meeting of this corporation: "America has done more for the education of its women than any other nation, and consequently the women of America have done more for their country than have the women of any other nation." Under the inspiration of this sentiment, which expresses a great truth, and in the name of Pan Americanism, let me ask the women of America, represented in this organization, to become better acquainted with their Latin American sisters. So beautiful a friendship would be the strongest tie between the two peoples, because it is woman's influence, after all, which shapes the course for the progress of nations.

PROMINENT IN PAN AMERICAN AFFAIRS

IN this issue of the BULLETIN it is a satisfaction to include the portraits and biographical sketches of a number of men who have acquired prominence in affairs Pan American through their travels, associations, and official connections in Latin America. In the persons of Mr. J. P. Santamarina, the well-known civil engineer, newspaper man, and trade expert of Argentina, is found the energetic Latin American who is devoting his best efforts toward the expansion of trade and commerce between the United States and the Argentine Republic. On the other hand there is the special representative of the United States Government, Mr. Charles M. Pepper, author, traveler, and commercial expert, whose reports, resultant from his extensive travels throughout Latin America, have been so potent a factor in awakening the present growing interest in the commercial wealth and possibilities of these countries.

The BULLETIN takes advantage of this opportunity to express its profound sorrow at the untimely demise of Dr. Florentino Ameghino, who died on August 6, 1911, and of Dr. Walter Wyman, who passed away on November 21, 1911. Dr. Ameghino was a scientist of note and exerted a most helpful influence in the fields of learning, while Dr. Wyman occupied a place of preeminence in the medical profession because of the extent of his activities to promote the hygienic and sanitary conditions of all nations.

DR. FLORENTINO AMEGHINO.—On August 6, 1911, there died in La Plata, Argentina, one of the world's best known and ripest scholars. He had developed the study of the historic and prehistoric races of South America with a natural talent which subsequent training brought to wonderful fruition, and his name was quoted as an authority on americana in all parts of the scientific world.

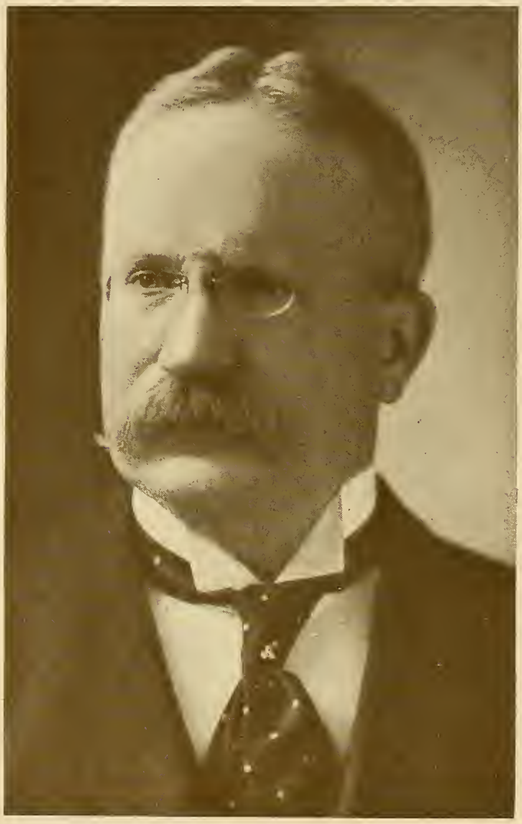
Florentino Ameghino was born in Lujan, Province of Buenos Aires, Argentine Republic, in 1854. He had no advantages of early surroundings of wealth or academic encouragement, but made his way alone into the circles of highest and most intellectual scholarship. His primary education was obtained in the municipal school of his birthplace, but, independent of all outside instruction, he began in his 16th year, without teachers, the study of natural sciences, for which he had an irresistible inclination. He spent some time in the capital, Buenos Aires, where he had one year in the normal school there, but in 1873 he returned to Lujan, and then in company with his brother Carlos, in the adjacent region, he began to form his noted collections, and to increase, in a practical way, his already extensive knowledge of the fauna of Argentina. His means being slight, he became a teacher in the municipal school of Mercedes, but dedicated all his spare hours to his scientific studies, making daily excursions into the country adjacent and adding immensely to his insight into the primitive life of the Argentine pampas.

DR. FLORENTINO AMEGHINO.

As soon as Ameghino commenced to publish the results of his researches, in American and European journals, they attracted immediate attention, and he at once sprang into well-merited fame. From 1875 to 1877 he issued his "Studies of the Formation of the Pampas," and "Antiquities of Uruguay." In 1878 he carried to the Exposition of Paris his collection of palaeontologic, anthropologic and Indian antiquities, receiving a first prize for them, and as he was able to sell a part of them for 120,000 francs ($24,000), he was relieved of immediate pucuniary anxiety and gave himself altogether to the publication of his great work, "The Antiquity of Man in the Rio de la Plata." In 1882, after having visited the principal museums of Europe, Ameghino returned to Argentina, honored by degrees from and membership in very many learned societies abroad. The University of Cordoba gave him the title of doctor of natural sciences and he was appointed professor of zoology and comparative anatomy in that institution. Later he was drawn to Buenos Aires as professor in the schools there, and chiefly to organize the section of palaeontology in the national museum. The Government soon appointed him director of the national museum, a position he occupied with productive vigor and great merit until his death.

The ministry of justice and public instruction, and the universities of Buenos Aires and La Plata took official part in the burial of this illustrious man, whose remains were placed in the necropolis of the city of La Plata.

Dr. Walter Wyman.—It is with deep regret that the Bulletin records the sudden death of Walter Wyman, surgeon general of the Bureau of Public Health and Marine-Hospital Service of the United States, on November 21, 1911. For several decades the name of Dr. Wyman has been most intimately connected with all problems, international as well as national, affecting hygienic and sanitary improvement and development. As chairman of the International Sanitary Bureau of the American Republics, Dr. Wyman won a place of unusual esteem among the scientific men of Latin America, and his progressive spirit contributed largely to the success of the various international sanitary conferences held at Washington, Mexico, and Costa Rica. His wide associations with public health movements of all nations, moreover, have given to Dr. Wyman a position of such prominence that his sudden removal from scientific fields comes as a sharp blow to the medical profession of the world. Dr. Wyman was born in St. Louis, Missouri, in 1848, and was educated at the City University of St. Louis, and at Amherst College, from which latter institution he received the degree of A. M. in 1889. He received his medical degree from the St. Louis Medical College, while later in life he was the favored recipient of honorary degrees from the Western University of Pennsylvania and the University of Maryland. Dr. Wyman entered the Marine Hospital


SURGEON GENERAL WALTER WYMAN.

Service in 1876, and his rise was at once steady and rapid. He effectively conducted several campaigns for the betterment of conditions among the seamen of merchant marine, and was intrusted with the enforcement of the Government measures to ward off cholera. He was also responsible for the effectiveness of the laws relating to quarantine, as well as those relating to quarters and food for seamen, and the Government regulation of manufacture and sale of viruses, serums, and toxins. It was through his efforts that a consumptives hospital was established at Fort Stanton, New Mexico; a leprosy investigation bureau at Hawaii; and a hygienic laboratory and bureau of public health at Washington. The extent to which Dr. Wyman's abilities were recognized finds expression in the various medical and scientific organizations with which he was affiliated, and the number of which he was the chairman. Among these were: American Public Health Association; Association of Military Surgeons; American Medical Association; American National Red Cross; Imperial Society of Medicine of Constantinople; International Congress on Tuberculosis, etc.

Mr. J. P. Santamarina.—An important and effective work in the development of commercial relations between South America and the United States is being splendidly carried on by Mr. J. P. Santamarina. Mr. Santamarina is a prominent writer and expert on Argentine trade relations, who was born in Argentina, educated in Europe, and served in the navy of his country as civil engineer. His scholastic tendencies and ability as a speaker and writer have served to stimulate in him a desire for close study of the conditions of the countries through which he traveled. This soon brought him merited distinction as an authority on commercial matters of Latin America, and of Argentina in particular. In his efforts to promote closer intercourse between the United States and the Argentine Republic Mr. Santamarina has made many visits here, and on various occasions has delivered a number of lectures on Argentina and published many articles on the resources and trade possibilities of that country. He was also one of the promi-

J. P. SANTAMARINA.

Authority on Argentine trade and commerce.

nent members of the Argentine delegation to the First Pan-American Commercial Conference, held under the auspices of this institution, during February last, at Washington. Mr. Santamarina is now conducting a trade-expansion campaign in the form of a series of practical conferences which are held in the principal cities of the United States. It is planned to hold these meetings throughout the various commercial centers of this country, and to have each meeting devoted to several trade subjects addressed by prominent trade experts, to be followed by an open session for questions and answers. The first meeting of this series was held in New York City during October, and was largely attended by leading exporters, importers, and manufacturers. Mr. Santamarina is to be congratulated upon his constant and energetic efforts in this direction, and it is a pleasure to comment in these columns on his endeavors to foster the spirit of closer union between the United States and their neighbors to the south.

(Photo by Harris-Ewing.)

CHARLES M. PEPPER.

Commercial Adviser to the Department of State of the United States.

Mr. Charles M. Pepper, commercial expert, author, and traveler, holds a position of unique prominence and distinction in the commercial life of the Americas, due to his many official connections with Pan-American affairs. He has made frequent visits to nearly every country embraced in the Pan American Union, while his extensive studies and reports on commercial and industrial conditions of Latin America have been most influential in stimulating a keener and deeper interest in our sister Republics to the south. His investigations, moreover, have been a potent factor in calling the attention of the commercial world to the wonderful progress and potentialities of the Republics of the Western Hemisphere and in awakening these countries to the realization of the splendid possibilities existing for a profitable exchange of trade between the Americas. In his capacity as an economic and commercial expert for the

Government, Mr. Pepper has been afforded opportunities for extensive studies of the industrial and commercial situation of Latin America. Combining these opportunities with his ability as a journalist, he has published the results of his observations in monographs which are considered in the official world as authoritative statements on Latin American trade conditions. At present Mr. Pepper is assigned to duty as commercial adviser to the Department of State of the United States, and is regarded as one of the highest authorities on commercial conditions of Latin America. Mr. Pepper was born in Ohio, November 11, 1859. He was graduated from Wooster (Ohio) University in 1881, and engaged in newspaper work in Chicago, Washington, and New York. He went to Cuba during the insurrection as representative for a newspaper syndicate, making special economic and commercial investigations while there. His works include two books, "To-morrow in Cuba," and "Panama to Patagonia," and a number of special magazine articles, trade reports, etc. Mr. Pepper was appointed one of the United States delegates to the Pan-American Conference at Mexico in 1901-2, and subsequently filled various official missions to Latin American countries. As special commissioner to investigate the Pan-American Railway project, Mr. Pepper visited Mexico, Central America, and nearly all of the countries of South America, and was made a member of the permanent Pan-American railway committee. In 1905 Mr. Pepper associated himself with the Department of Commerce and Labor, and as its special representative again visited many of the Latin American countries to make special commercial reports. Although the larger portion of Mr. Pepper's studies were devoted to trade conditions in Latin America, he has, nevertheless, been actively engaged in the department's efforts to extend the foreign trade of the United States in Canada, Egypt, India, and Tur-

CHARLES M. FREEMAN.

Former United States Consul at Durango, Mexico.

key, and was also delegated by the Government to visit Europe in order to make special investigations for the committees of Congress on tariff questions.

Mr. Charles M. Freeman.—One of the United States consuls who has spent several years at a Latin American post but has recently been transferred to another country is Charles M. Freeman, for four years consul at Durango, Mexico. Mr. Freeman was born in Portland, Maine, in 1855, and received his elementary education in the public schools of his native city. He then continued his studies at the University of Maine. Taking an active part in the progress of his city, Mr. Freeman was elected several times to public office, but later removed his residence to Hillsboro Bridge, New Hampshire, where he engaged in business. Here, too, Mr. Freeman held various public elective offices and now regards this city as his legal residence. In 1898 he was offered the position of United States commercial agent at St. Pierre, and while at this post he acted as British consul for 10 months in 1905. On June 22, 1906, Mr. Freeman was promoted to the position of consul at St. Pierre. The following year he was transferred to the post at Durango, Mexico, of which consulate he was the incumbent until August 19, 1911, when he was promoted to the important post at Sydney, Nova Scotia.

THOMAS D. EDWARDS.
United States Consul at Ciudad Juarez, Mexico.

Mr. Thomas D. Edwards, the present incumbent of the United States consulate at Ciudad Juarez, Mexico, was born in Floyd, New York, April, 1849. He later in life chose Lead, South Dakota, as his legal residence and has regarded that place ever since as his home town. Mr. Edwards received his education at the various institutions of learning in Rome, New York, and entered the newspaper work. His ability in this direction soon brought him the editorship of a daily newspaper, which position he held for 20 years. In 1883 Mr. Edwards was tendered the position of postmaster at Lead, South Dakota. He accepted the office, which he ably filled for three years, and resigned to accept various other municipal official positions. After formal examination Mr. Edwards was appointed United States consul to Ciudad Juarez on June 30, 1905, which post he is occupying at the present time.

Mr. Charles L. Latham.—Another United States consul who has figured frequently in Latin American affairs is Charles Louis Latham. Mr. Latham was born in Greenville, North Carolina, December 18, 1877, and was educated at private schools and at St. Mary's College, Gastoria, North Carolina. He continued his studies at Bingham Military School, Asheville, North Carolina, from which institution he was graduated in 1898. After several years of activity in the business world Mr. Latham entered the Georgetown Law School, at Washington, graduating therefrom in 1904. During his residence in Washington he was employed as clerk in the War Department. After due examination he was appointed to the position of consul at Cartagena, Colombia, on February 17, 1909. This position he occupied until August 19, 1911, when he was promoted to the post at Punta Arenas, Chile.

(Photo by Harris-Ewing.)

CHARLES L. LATHAM,

United States Consul at Punta Arenas, Chile

LATIN AMERICA IN THE MAGAZINES

"Across South America. A Narrative of Personal Experience in the Andes and on the Amazon," by Charles Johnson Post, appears in the first installment of the November Century. Mr. Post tells the story in a very entertaining way, but is inclined to stress the difficulties of the journey and to see the darker side of the picture—the shadows instead of the high lights—of the country he is passing through. However, his descriptions of the magnificent Andean scenery are graphic and couched in masterly prose that sometimes borders on the poetic. As an instance we quote his description of the scene when he reached the summit of the ascent:

At rare intervals some eddying rift would be blown in the mists, and for a brief moment Mount Sorata would stand clear and sharp against the blue patch of sky, with its great white shoulder scarcely more than 5 miles away across a precipitous gorge. High above our world it seemed to rise, a Titanic, bulking, cataclysmic mass, magnificent in its immensity. Enormous cliffs of snow towered above the scarred, black gorges of its flanks, glittering in the flash of momentary sunlight and irridescent in the purple shadows. High against its face clouds were born and were shredded in the blast of an unseen gale; now and again an avalanche of snow broke from some slope and was whirled in a feathery spray into the shadows of a gorge thousands of feet below. It could blanket a dozen villages, yet it was diminished on the tremendous slopes until it seemed no more than the tiny avalanche on a tin roof at home. Vertically, nearly 2 miles above the trail across the divide, rose the white fang of the summit that has still defied all efforts at scaling.

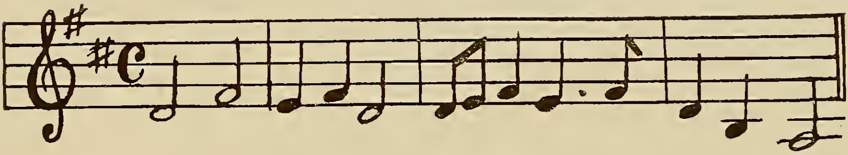
LLAMAS ON THE HIGHLANDS.

After the cairn that marks the divide is passed, the trail leads abruptly downward. At first it is a relief to lean back in the saddle and feel the strain come on the crupper while the breast strap flaps loosely once more, but hour after hour of constant descent and the constant straining back in the saddle became more irksome and monotonous than the leaning forward on the upward climb. The descent is rapid. The pack train coils about among the buttresses of the mountains along a broad shelf that is often cut into the steep slopes and always plunging downward. We were almost below the line of clouds, and a few moments later they were drifting past just overhead, and there, far below us, stretched the deep, crooked valley of Sorata.

It was the very heart of the Andes. In the wedge-shaped channel of the tortuous valley a slender thread of white torrent narrowed and disappeared in the haze of depth and distance. The huge mountains swept upward like the sides of a great bowl, while delicately floating strata of fleecy clouds seemed to mark off and measure and then accent their enormous altitudes. Beyond and above them rose other peaks and the jagged fangs of interlocking mountain ranges that formed this colossal Andean maze. There was no sense of distance, even the feeling of space seemed to be for the instant gone, and, under the long mellow rays of the afternoon sun, with this vast shattered universe spread before us, it was as though we had been suddenly translated and left dizzy and bewildered in an opalescent infinity.

Among his descriptions of scenes characteristic of the Bolivian Andes are the following paragraphs dealing with a breeding ground for llamas and with the Aymara herders:

On the new trail the dead level of the plateau gave way to more rolling country, the ragged, snow-capped line of mountains at the horizon came closer. Huayna-Potosi loomed on our right, and, growing more impressive every hour, was the great, white mass of Mount Sorata, dead ahead. Then the rolling country closed in and narrower valleys succeeded, with the rugged foothills on each side. In this part was an enormous breeding ground for llamas. For miles the hills were dotted with them. Baby llamas, newly born and still blinking at the strange world, huddled timidly in behind a tuft of bunch grass or behind some small bowlder, while the queer, goosenecked mother stood near with apparent indifference. Little llamas in all stages of adolescence and awkwardness gamboled on the hillsides, and the llama herds dotting the slopes looked for all the world like big, stiff-necked, grotesque sheep. Among them were the Aymara herders who, like traditional shepherds, played their weird and mournful flutes or pipes. Over and over again came the same strain carried for miles in the thin, still air. In the various fiestas there are many varieties, but in the mountains or on the trail, for often they play as they walk, it is almost always this invariable measure:



One of its little phrases curiously reminded me of that chanted taunt of my boyhood, "Over the fence is ou-oot!"

Rarely does the Aymara make his own flute or pipe, simple though it is. Their manufacture is a native industry by itself. Like a true musician, the Aymara must have his instrument just so, and up in the higher altitudes the flutes are made and brought down to be sold in the market on the days of fiesta. His single weapon, a sling of the pattern made famous by David and Goliath, is of twisted llama wool, and will throw a stone the size of a lemon. He develops a wonderful skill in its use.

It may be well to state that the Aymarás alluded to by Mr. Post are the remnants of the once powerful race of Indians that dominated Bolivia and parts of Peru before they were conquered by the Incas, in the thirteenth and fourteenth centuries. Long before this time they seem to have possessed considerable culture, as is evidenced by some of the remains of their civilization. The legends of the Incas attributed the origin of their own civilization to the regions where dwelt the Aymarás, and their "holy land" was located near Lake Titicaca.

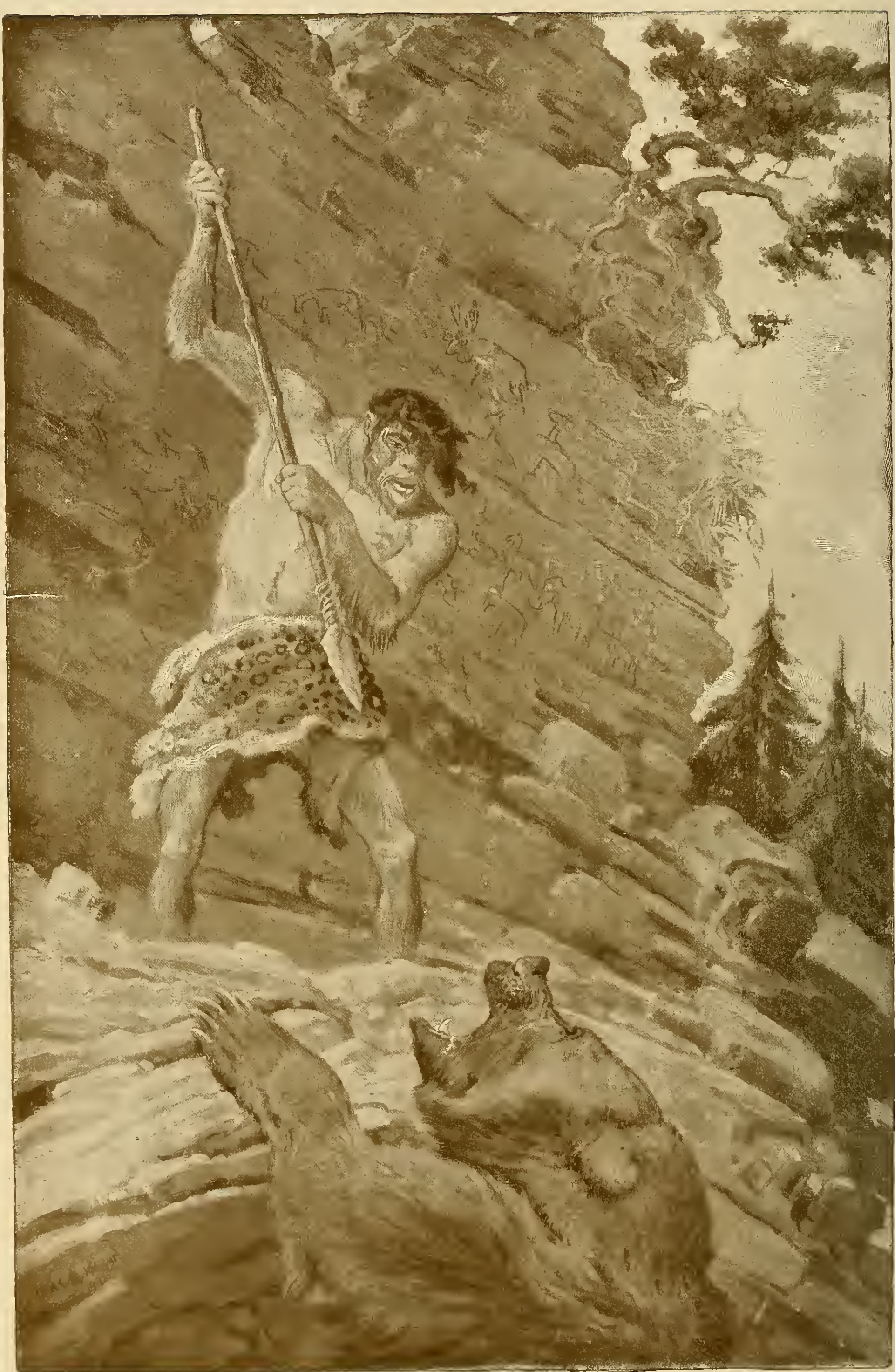
When the conquering Spaniards invaded the country and subjugated the Incas, the Aymarás had long been in subjection to the latter and were then a decadent race, retaining, however, their language and ancient customs. Physically they are short and thickset, with an unusually large chest development, doubtless due to the constant breathing of the rarified atmosphere of their elevated Andean home. They have the same reddish complexion, broad face, black eyes, and rounded foreheads that distinguished the Quichuas or Incas, and doubtless the origin of both races could be traced to the same parent stem.

One of the unique and attractive features of Mr. Post's article is its embellishment by his own artistic drawings, depicting scenes, incidents, and characters met with on the journey.

In the October Century we note a most interesting article by Dr. Frederic A. Lucas, on "**The Antiquity of Man,**" This, as the subcaption states, is "A brief survey of the evidence in the light of the most recent discoveries," and the portion of the article of most interest to the people of the Western Hemisphere is that which deals with the question as to whether man's first appearance thereon was in North or South America. The general assumption has heretofore been, largely for reasons advanced in the excerpt given below, that man's first appearance in the Western World was due to migration from Asia; but this assumption is called in question by late discoveries, as Dr. Lucas points out in his excellent article.

The article is, of course, scholarly and authoritative, and we take the liberty of reproducing an excerpt of that portion which is of peculiar interest to the readers of the BULLETIN.

It has been generally assumed that man made his appearance somewhere in southern Asia and then spread in various directions to people the earth, and that the New World is very new so far as man is con-



Courtesy of the Century Magazine. Drawn by Charles R. Knight.

AN EPISODE OF THE STONE AGE.

Our very-great-grandfather of some 700,000 years ago as science pictures him in an unpleasant episode.

cerned. Although this assumption still stands as a general proposition, accumulating evidence tends to show that while man is a comparatively recent arrival in the Western Hemisphere, yet he is positively old, and must have reached here very many thousand years ago.

Curiously enough, testimony of the existence of early races of man in America comes from the south and not from the north, where theoretically man should have come into the Western Continent by way of some convenient bridge of land or ice where Behring Strait now is. There have been, it is true, various discoveries that at first sight seemed to place a high antiquity on man in North America, but none of these has stood the searching light of scientific investigation, and not one is generally, not to say universally, accepted by the world of science. Probably the most striking discovery in South America was that made in 1896 by Nordenskjöld, showing that the extinct giant ground-sloth Mylodon, a predecessor of the mastodon, was kept in a state of domestication by early man. Since then various skulls and portions of skulls, some nearly complete, some fragmentary, have come to light, and while most will consider that while Dr. Ameghino overestimates the age of these crania, none can deny the great antiquity of all and the primitive character of some. Of doubtful age and origin are certain masses of baked clay, ascribed by Dr. Ameghino to fires made by man, and by his opponents to the heat of volcanic eruptions. Be this as it may, the evidence available at present shows the existence of man at an earlier date in South America than in North America.

In speaking of the traces of the earliest existence of man, Dr. Lucas incidentally gives us the following picture of our somewhat remote ancestor, whose antiquity is such that in comparison we feel almost closely related to the Neanderthal man, who lived but a paltry 100,000 years ago.

Many of us would like to know just how this very-great-grandfather of ours looked, and there have been various attempts to gratify this quite natural curiosity. We have a good foundation to build on in the way of fairly complete skeletons, but many details are necessarily left, if not to the imagination, at least to the theories of the re-creators. We know that this far-off ancestor of ours was a little under the average height, with slightly longer arms than man has nowadays, and that the thigh portion of the leg was proportionately longer than in any modern man; also we know that he had a low forehead and beetling brows, and that while the jaws as a whole were prominent, the chin was retreating. Owing to the straightness of the backbone and the bend in the knees, the body was probably carried with a slight forward stoop. Of this we are fairly certain; it is when we come to externals that we call upon the law of probabilities to give him a swarthy complexion and endow him with a considerable covering of hair, characters that exposure to weather seem to call for.

"**Through the Gateway of El Dorado**" is the title of Casper Whitney's second installment of his South American stories appearing in Harper's Magazine for November. In the early days of the Spanish conquest the fabled land of El Dorado was the great incentive which led to the exploration and exploitation of the section where these riches were supposed to lie in the lap of nature—to be had for the gathering—and Mr. Whitney locates it as follows:

For the better part of two centuries, indeed, had the reported riches of this mysterious land been noised about the small world, to gather soldiers of fortune at every gateway and put in motion a series of daring explorations never since equaled. From the Meta River on the north to the Caqueta (a north branch of the Amazon) on the south, from the Andes' Cordilleras on the west to the Rio Negro and the Orinoco on the east, so ranged the fabled land where gold and precious stones awaited the successful adventurer. In the wilderness between the Guaviare River, which empties into the Orinoco at San Fernando de Atabapo, and the Uaupes, entering the Rio Negro just above San Gabriel, Von Huten sought the El Dorado. Driven by the same impulse, Ordaz, a captain of Cortés, in 1531 explored the Orinoco as far as Atures, the north end of the great cataracts; Herrera went up the Meta via the Orinoco four years later; Orellana, in 1561, voyaged down the Amazon; Quesada searched far to the west and south, even into Peru. And all the while the restless Caribs spread the fable along their voyages, which began at the mouth of the Orinoco and extended south to the Rio Negro.

Mr. Whitney's visit to this section was occasioned by his determination to explore the regions of the upper Orinoco above Esmerelda. In order to save time he made the successful experiment of utilizing one of the caños (natural waterways like our larger creeks) which come into the Guainia River from the east, and starting from Maroa cut across the country by paddling up the caño until it connected with the Casequiare River and thence to the upper Orinoco. This particular caño, which was entered a short distance below Maroa, was something like 100 yards wide, with quite a swift current.

One of the striking features of the waterways of the country which Mr. Whitney describes in his article relates to the variously colored waters of the rivers, and the fact that when one flows into another there does not seem to be any gradual diffusion, but on the contrary there seems to be a sharp line of demarcation at the apparent point of actual contact.

One of the phenomena of this land of waters is the retention by each of its own color without diffusion to the very point of actual contact, even where the rivers differ vastly in volume. Black waters flow into white ones, and white ones empty into black ones, retaining their individuality up to the very edge, a visible line of demarcation—on one side white, on the other side black—unmingled and unexplained. Thus the puny black Atabapo joins the surging white Orinoco to no loss of integrity: the black Negro receives almost at right angles the odious white Casiquiare without contamination, and itself empties into the Amazon, not so much as tinging the mud-colored waters of that mighty river. Humboldt reports on the lower Casiquiare, which I did not visit, a black and a white stream, both coming from the east, while of the rivers flowing in from the west, some are of white and some of black water. Of the number of small streams coming into the upper Casiquiare from the east, those I noted were olive. These colors, which among white waters range from the really white Branco through many yellowish mud shades, and of black waters from the greenish and bluish and deep brownish to the really deep, almost black, of the Negro, high up, are explained, the scientists maintain, by the character of the soil whence they take their source and through which they flow. Those rising among the decaying roots, leaves, and vegetable matter of the forests are the black, and the white those that have their source and course in the alluvial and clayey soils.

(Photo by Caspar Whitney. Courtesy of Harper's Magazine.)

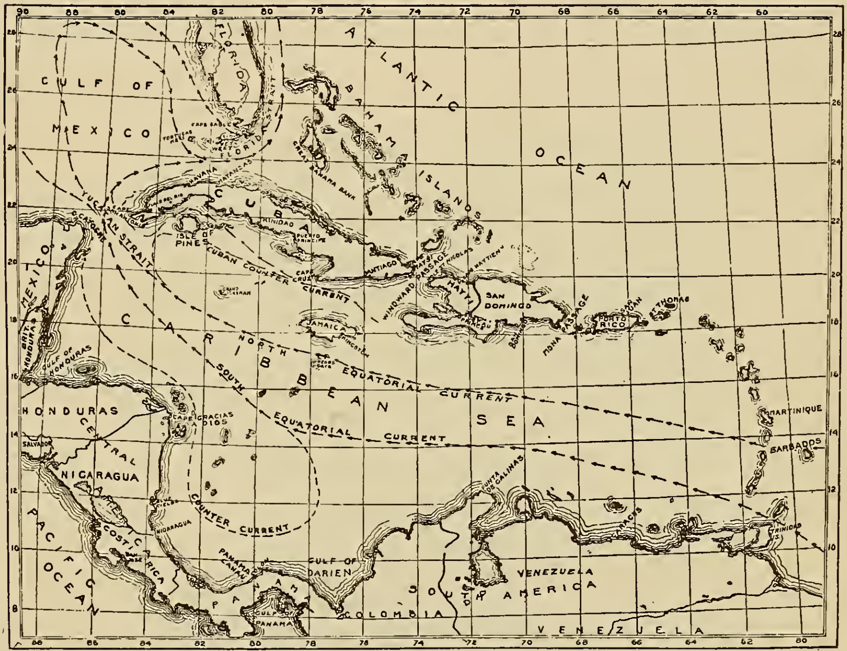
MR. WHITNEY'S CANOE AND ITS CREW OF SIX INDIANS.

Mr. Whitney's varied and extensive travels enable him to add interest to his articles by little touches of philosophic reflections on the manners, customs, and superstitions of the widely separated races that he has personally mingled with, noting unexpected similarities, such as the following paragraph interpolated in one of his passages descriptive of his crew of six Indians:

The ways of these men, less touched by civilization than any crew I had on the road, interested me greatly. Yet how much alike are the different species of the human family. In Siam and in Malaya my men built crude little altars in the jungle upon which to lay a bit of fruit, a flower, a piece of their costume when they wanted to propitiate their gods for protection against the fever of some malodorous spot, or against "the animal," as always the terrible tiger is spoken of. In the far north, as we worked our weary starving way back from the Barren Grounds, old Beniah, leader of my company of Dog-Rib Indians, was wont to invite a fair wind by throwing pinches of the treasured tobacco into the air with muttered invocation. At the other end of the world, here on the Casiquiare, my men had rather a literal manner of casting their bread upon the waters by throwing a handful of mandioca over the side of the canoe, or a piece of shirt, always accompanied by palaver, which probably stood for a prayer of relief, though, of course, I never knew.

"**Charting and Lighting the Caribbean**" is a timely article in the November number of the American Review of Reviews, by Herbert Janvrin Browne. The author dwells upon the deplorable scarcity of lighthouses and gives many instances of inaccuracies in charts and maps of this region. The urgent need of attention to the existing conditions is shown in the first two paragraphs of the article:

> An average annual loss in wrecks in excess of $2,000,000 in the Caribbean Sea directs attention to certain problems in this basin, considered as the Atlantic approach to the Panama Canal, now nearing completion. That the stated loss is due principally to conditions which can be remedied is recognized by all maritime authorities. That this record of marine disaster threatens to rise proportionately with the prospective threefold development of commerce through the canal urges consideration of these problems in their larger and more scientific aspect.
>
> With a longer littoral and area equal to the Mediterranean, the Caribbean presents a series of related conditions no less interesting than those of the Suez gateway and far less advanced toward solution. Foremost in immediate commercial and maritime importance come questions of accurate and comprehensive charting, of adequate lighthouses, beacons, and buoys. Following closely run the detailed and seasonal study of currents, meteorology, magnetic variations, and the imperfectly known contours of the ocean bed. The geology of the littoral and islands needs critical examination, for in few other portions of the known globe are the forces of erosion, upheaval, and coastal growth in such rapid operation.



MAP SHOWING THE CARIBBEAN SEA AND THE TWO EQUATORIAL CURRENTS ENTERING THROUGH THE PASSES OF THE LESSER ANTILLES AND THE COUNTER CURRENTS FLANKING THESE ON EITHER SIDE.

The author then gives details as to inaccuracies and omissions in many of the accepted maps and charts, the grotesque mixture of the nomenclature of this region, the scarcity of lighthouses when contrasted with the Mediterranean, and also describes the ocean currents as follows:

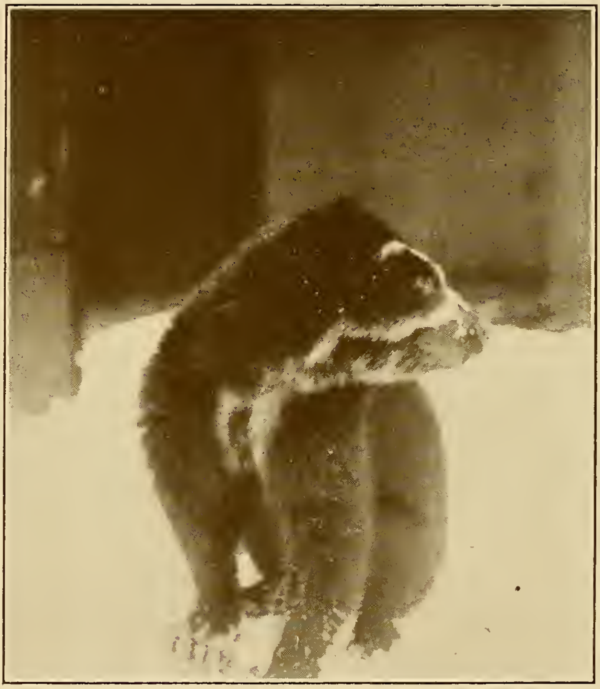
> Two equatorial currents enter the Caribbean through the passes of the Lesser Antilles, cross its vast stretches, and barely join in the forced embraces of the tumultuous channel of Yucatan. Again separating three streams are formed, one encircling, the second dividing the Gulf of Mexico, finally uniting with the third in the Straits of Florida. These twin thermal rivers of the Caribbean are flanked on either side by counter currents hugging the continental and Cuban coasts until they surrender to the Tropic sun or sink to the slow-moving abysses of the sea.

These surface currents are subject to extraordinary changes of volume, speed, direction, and temperature, effects of partially understood seasonal and meteorological conditions. Only careful and long-continued stream measurements and observations at critical and widely separated points, joined and harmonized with extended weather and tidal observations, will solve the problems.

Imperfect knowledge of the commingling of an easterly offshoot of the north equatorial current with the Cuban counter current between Cape San Antonio and the Isle of Pines has resulted in enormous loss of property by wrecks in the vicinity of Cape Corrientes, Cuba, in the last three years. Pushed up by the shallow bottom of the approaching coast this strange current doubles its speed at times to 4 knots an hour, and the unfortunate navigator caught unawares in the eastern curve finds his vessel piled up on the unlighted Cuban coast. A sum represented by the losses at this one point would cover the cost of the most comprehensive and scientific survey outlined in this article.

As a first step looking toward the improvement of this state of affairs the author makes the following suggestion:

It is evident that a comprehensive study of the Caribbean problems calls for international treatment. The Territories of 15 Governments border on this basin. The harbors and coasts of other nations can not be invaded even for friendly surveys. Lighthouses and weather stations are national projects. * * * A conference committee to meet in Washington under official invitation at any early date, international in its membership and of the highest scientific and economic rank. Such a committee would be able to formulate plans and organization, to define the work, and recommend methods for its practical accomplishment.



(Courtesy of the New York Zoological Society.)

THE SPECTACLED BEAR.

Frederico, the rare specimen of *Ursus ornatus*, commonly known as the "Spectacled Bear," recently acquired by the New York Zoological Society. The species is found only in the South American Andes.

"**The Spectacled Bear**" is an article in the Bulletin of the New York Zoological Society descriptive of the recently acquired rare specimen of *Ursus ornatus*. Being strictly an Andean species and very rarely found in captivity, we reproduce the following excerpt from the article:

On at least three or four occasions the spectacled bear of the Andes has been exhibited in zoological gardens for brief periods. During the past 15 years, which have embraced many tours of the zoological gardens of Europe by American zoologists, we have seen but one specimen, which was in the Amsterdam Garden, in 1903. We have not heard of a specimen being exhibited in North America prior to the arrival of the one now here.

During the past 11 years our efforts to secure a spectacled bear have been persistent and continuous. Every person bound for South America and offering to procure for us any animal found in that continent, has been importuned to procure an *Ursus ornatus*. After years of waiting and many disappointments, Mr. Edgar Beecher Bronson, author of "In Closed Territory," finally procured for us in Quito, Ecuador, a fine specimen of the species so long desired. It was obtained from Don Segundo Espinoza de los Monteros, governor of the Panoptico at Quito, and is now about 2 years old. * * * Frederico arrived at the park on January 9 in perfect condition.

Frederico, *Ursus ornatus*, is a jet black bear of rather slender build with a long, rangy body, very long feet, small ears, placed far apart, semicircular claws of large size for a small bear, and on his face and throat the strange white markings from which the species takes its name. Instead of the usual complete circle of white surrounding each eye, the circle is broken over the eye, and on the cheek a broad white band extends downward to the throat, where it meets a crossbar of white. From this half collar two bars of white extend down the throat to the breast, closely parallel. Frederico's height at the shoulder is about 32 inches, and his weight must be about 160 pounds. Having several more years of growth ahead of him he should attain to double his present weight.

Regarding the life history of *Ursus ornatus* very little is known beyond the fact that it inhabits the Andes of Ecuador and Peru. Its dentition is said to resemble in certain features that of the sloth bear of India, but we do not vouch for it. * * * Frederico is very tame and indulges in several amusing tricks, one of which consists in jumping repeatedly, like a bucking horse.

"**The Carnegie Endowment for International Peace,**" a part of the opening address of Dr. Nicholas Murray Butler, president of the Lake Mohonk Conference on International Arbitration, appears in the last issue of the American Journal of International Law. Dr. Butler is a member of the board of trustees and of the executive committee of the Carnegie Endowment for International Peace, and his is the first authoritative and detailed statement of the work to be undertaken and the method to be pursued by this institution.

The activities of the institution are to be classed under three principal divisions or departments:

(1) The division of international law, which will be under the direction of Prof. James Brown Scott:

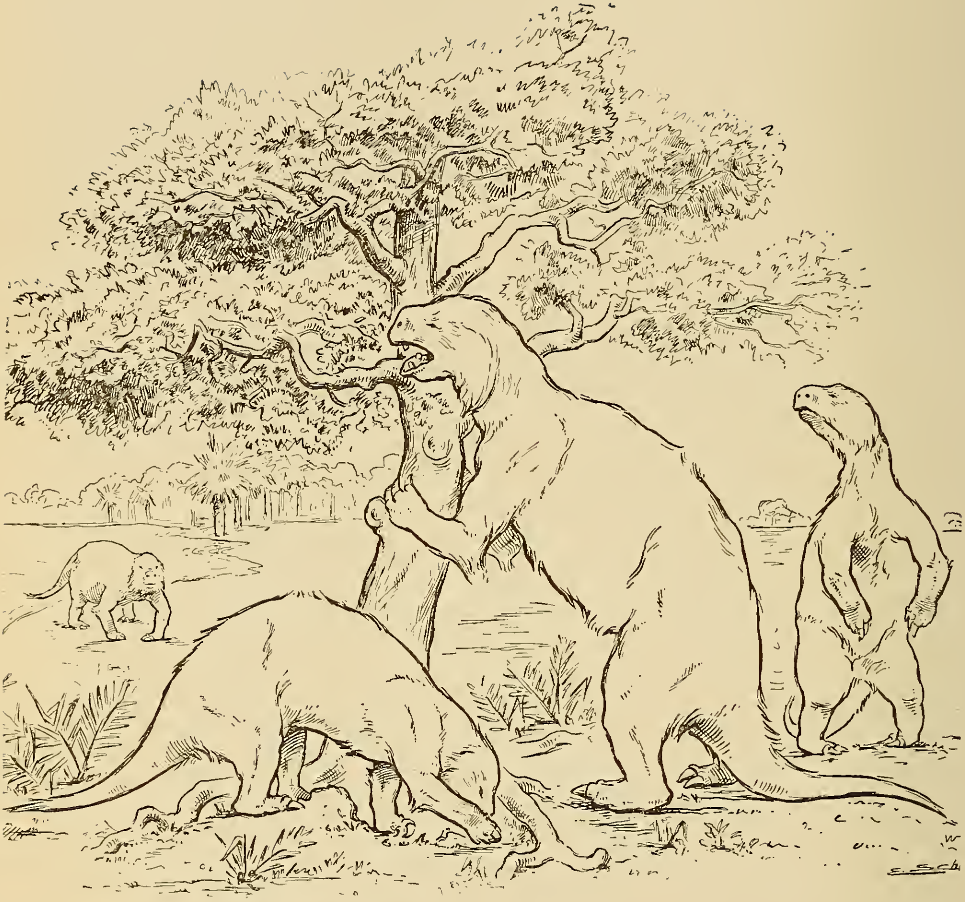
Will promote the development of international law by study, by conferences, by aiding negotiations and by publication, and will assist in bringing about such a progressive development of the rules of international law as will enable them to meet with constantly growing adequacy the needs of the nations of the world in their juristic relations toward each other. It will not be sufficient, however, to bring the principles and rules of international law to the notice of the people of various nations; the rights and duties that are implied in these principles and rules and that follow from them must be clearly and effectively taught. Furthermore, this division of the endowment will aim constantly to inculcate the belief that intercourse between nations should be based upon a correct and definite idea of international justice. To the perfecting and clarifying of the fundamental conception of international justice this division will assiduously devote itself. * * *

For this purpose the endowment will associate with Dr. Scott a consultative board composed of some of the most distinguished international lawyers in the world. The point of view of each great nation will be represented in their councils, and the results to be arrived at will be the joint work of jurists of every schoo and of every language.

(2) The division of economics and history:

It will be under the direction of Prof. John Bates Clark, of Columbia University, whose foremost place among English-speaking economists is gladly recognized everywhere. The work of this division, like that of the division of international law, will be scientific and scholarly in character, in organization, and in method. Like the division of international law, the division of economics and history will aim at the education of public opinion and at the formulation of conclusions that may serve for the guidance of governmental policy. With Prof. Clark will be associated a score of the world's leading economists. * * * The results arrived at in this case, as in the case of the division of international law, will not be those imposed upon the judgment of one people by the scholars and economists of another, but they will be those that are reached by cooperation between economists of a dozen nations.

It will be the business of this division of the work of the endowment to study the economic causes and effects of war; the effect upon the public opinion of nations and upon international good will, of retaliatory, discriminatory, and preferential tariffs; the economic aspects of the present huge expenditures for military purposes, and the relation between military expenditures and international well-being and the world-wide program for social improvement and reform which is held in waiting through lack of means for its execution.



Courtesy of American Museum of Natural History.

A GROUND SLOTH GROUP.

Sketch of the ground sloth exhibit installed in the Quarternary Hall of the American Museum. The skeletons are grouped around a tree trunk in poses indicating the supposed habits and adaptation of the living animals. The Lestodon, standing on his hind legs, is endeavoring to reach up and drag down branches of the tree. One of the Mylodons is busily digging and tearing at the roots to loosen and break them and so help his big friend to uproot and pull the tree down. A third animal is coming around the base of the tree to assist in the digging operations, while a fourth stands at a short distance ready to add his weight to drag down the branches when they are brought within reach.

(3) The division of intercourse and education—

the director for which has not yet been announced. It will be the function of this division to supplement the work of the two divisions, which may be called, perhaps, the scientific ones, by carrying forward vigorously and in cooperation with existing agencies the educational work of propaganda, of international hospitality, and of promoting international friendship. Among the tasks of this division will be to diffuse information and to educate public opinion regarding the causes, nature, and effects of war, and the means for its prevention and avoidance; to establish a better understanding of international rights and duties and a more perfect sense of international justice among the inhabitants of civilized nations; to cultivate friendly feelings between the inhabitants of different countries, and to increase the knowledge and understanding of each other of the several nations; to promote a general acceptance of peaceable methods in the settlement of international disputes, and to maintain, promote, and assist such establishments, organizations, associations, and agencies as shall be deemed necessary or useful in the accomplishment of the purpose for which the endowment exists. In other words, this division will make practical application of the teachings and findings of the divisions of international law and of economics and history.

The above excerpts give but a very inadequate idea of the scope of the work of the Carnegie Endowment for International Peace, as outlined by Dr. Butler. The present lamentable state of affairs in Europe emphasize the pressing necessity of beginning a world-wide propaganda such as is outlined.

"**South American Markets and Our Merchant Marine,**" with the subcaption "Argentina," is an extensive and well-illustrated article by J. G. Corey in the September number of Commerce and Industries Magazine.

Mr. Corey devotes the first two pages of his story to arguments for the rebuilding of the merchant marine of the United States and severely arraigns those opposed to governmental aid to the shipbuilding interests. He says:

> This is not a political question. It rises above politics, and every Republican and Democrat in Congress should legislate for the benefit of the American people, regardless of any section that may be benefited more than another. Millions of capital would be readily invested in shipyards and merchant ships were our Government to adopt a policy of protection. By that we mean that our American steamships should have the carrying of American mails to all the ports of the world where they run. This would give employment to hundreds of thousands of men and create investment opportunities for millions of idle capital seeking investment in new enterprises * * *. There is no reason why American-built ships could not be built and operated as cheaply as in any other country in the world. The one real objection that is raised—

and here Mr. Corey touches a crucial point in the whole question—

> is the fact that we pay double the wages here that are paid in Europe. That is true not only in shipbuilding, but it is true in every industry that we have in the United States, and yet it has been proven over and over again that with our inventive genius we have been able to manufacture goods as cheaply as they are manufactured in Europe. Our labor produces twice as much here as abroad.

Leaving the discussion of this question, Mr. Corey turns to the matter of closer relations and better acquaintance on the part of the people of the United States with those of South America and speaks of the advantage of travel in this direction in the following strain:

> There are tides in travel. In years past the drift was westward, and thousands followed the pioneers to the Golden Gate. In past years the tide set toward Europe, and all that could spare the money were found with their Badaekers looking for the ruins as well as the art galleries of Europe. By this time the great European centers have been pretty thoroughly explored by American scholars and travelers. The tide of travel is changing, and now Americans are looking southward and making a study of the enchanting history of our sister Republics and the delights which bountiful nature offers the visitor to their charming regions. South America has been called the world's great garden, a continent of bloom. It is the native soil of countless flowers, fragrant and full of color. Nowhere in the world do we find more luxurient vegetation. Birds of bright plumage are seen everywhere. The skies are kindly. South America is a continent of the greatest rivers and the most towering mountains. It is the Andean peaks which have tempted the famous mountain climbers to their most daring feats. When winter blasts are sweeping over North America, the southern continent is basking under the warm and genial sun of summer. A voyage to South America can be made the most enjoyable and at the same time the most profitable of any trip that can be taken by the student, the manufacturer, or banker to any part of the world. The antiquarian is finding the relics of the Incas most interesting, and is led to dream of an almost forgotten past.

The article concludes with a detailed description of Buenos Aires in particular and Argentina in general, giving geographical, political, social, educational, commercial, and statistical information in a most entertaining style.

In the same number of this magazine we note an article entitled "**Factors of Success in South American Trade,**" by S. H. Grech. The author is a foreign-born American, for many years engaged in South American trade, and is now the representative of a trading company doing business in these markets. His wide and varied experience in the export trade gives point to his well-written article.

"**Operating a Mexican Opal Mine**" is an instructive and interesting article by T. M. M. Macfarlane in the Mining and Engineering World, of October 14, 1911. It deals with the industry as carried on in the State of Queretaro, Mexico, and enters into details from the mining of the rough stones to their final dressing or polishing.

Another article in the same publication is "**The Future of the Honduras Mining Industry,**" by Paul Wooten. The author dwells on the wonderful richness as well as diversity of the mineral resources of that country and the present neglected condition of the mining industry and its magnificent future possibilities.

In the October issue of the American Review of Reviews, under "**Progress of the World,**" is noted the organization of the Atlantic & Pacific Transport Co., with Mr. Bernard N. Baker, of Baltimore, as president. The authorized capital of the company is placed at $15,000,000 and its purpose is to operate a fleet of American-built ships from ocean to ocean through the Panama Canal. The plans, however, according to this article, seem to be contingent upon the new company's success in bidding for the ocean mail contracts now being advertised by the Postmaster General and for which proposals will be received up to November 25 next. The Government offers 10-year contracts for weekly mail service between New York and Colon, New Orleans and Colon, San Francisco and Panama, and fortnightly between Seattle and Panama, to be inaugurated on the completion of the canal in 1913.

An important factor in this company's business will be the incidental trade with Central and South American countries. This the company proposes to develop by means of a system of seagoing barges to operate along the coast and connect with the mail steamers from the United States. These barges are to be of light draft, in order that they may be able to penetrate the shoal bays, roadsteads, and rivers, and thus build up a large traffic to be transferred to the large ships. At the canal entrances, Colon and Panama, large piers and warehouses for the handling of such traffic are already under construction by the Isthmian Canal Commission on behalf of the Government. President Baker states that within easy water communication of these points there are 14,000,000 people, representing not less than $135,000,000 commerce. It is the hope of Mr. Baker and his associates that the United States may be able not only to secure a large share of this commerce, but that it may be substantially increased in volume.

"**Banking in Mexico,**" by Sr. Enrique Martinez-Sobral, is the first installment of an article dealing historically and technically with the banking business in Mexico, in the Mexican Financier of October 7, 1911.

"**A Reading Journey Through South America,**" the first of a series of articles written by Harry Weston Van Dyke for the Chautauquan, appears in the September number. This article deals with the "Discovery and conquest" of the South American countries, and shows careful preparation and research. The second of the series, covering the "Colonial period and war of independence," appears in the October number.

Much of the material of these articles was gathered from the Columbus Library of the Pan American Union and other sources of information peculiar to this institution, and hence the valuable information—geographical, historical, and social is of the most accurate character.

The style of compilation and the narrative form given to otherwise dull facts are very attractive.

Mercurio is the name of a new magazine which begins its first number in September, 1911. Its editor is Joseph Branyas, and its business office is in the Progressive Union Building, New Orleans, Louisiana, where it is published. The contents of the Mercurio might well satisfy all tastes; there are pages of essays, a good poem or so, a description of the building of a monster ocean greyhound, notes on events of contemporary interest, a daily chronical of history (for the month between July 15 and August 15, 1911), abundant fashion notes, a page of selected cartoons, and some jokes. There are also many interesting advertisements in both the front and back of the volume, but, fortunately, the body of it is given altogether to the reading matter. All these pages are in Spanish, evidently written by Spaniards (that is, Spanish-speaking men or women born and educated to the language). The illustrations, of which there are many, are particularly fine examples of the engravers' and half-toners' art. Indeed, the Mercurio is worth reading, either by the Latin American who lives at home or may be residing abroad, or by the foreign student of the language who wishes to have at hand current literature, in Spanish, with which he can amuse himself while profiting thereby. The price of the subscription to Mercurio, which promises to appear as a monthly, is $1.50 gold a year.

"**Coffee Plantations in Southern Mexico**" is quite an extensive and well-illustrated article by O. Sperber in the November Bankers Magazine. The article deals with the coffee plantations of the Soconusco district, along the border of Guatemala in the State of Chiapas, Mexico, and among the other interesting features is a detailed estimate of the expenses and receipts of a new coffee plantation. The estimate is given in tabulated form and is very comprehensive. It covers a period of 10 years and includes as the first item $15,000, the purchase price of 1,700 acres of land, including contracts for 10 families of laborers and advances to these for 1911, and, proceeding, gives the estimated yearly expense for each of the succeeding years. The total expense is given at $352,350 and the total estimated receipts for the 10 years is $525,000, thus showing a net profit of $172, 650. After this period the net profits should be much greater—the initial expenses for land, trees, nurseries, etc., being eliminated.

In describing the soil and climatic conditions of the district, Mr. Sperber says:

> The soil of Soconusco is particularly suitable to the cultivation of coffee. It consists of a rich, deep humus, of volcanic origin, with a slight proportion of lime. The climatic conditions of that region are likewise particularly favorable to the growth of the coffee plant.
>
> Reliable reports covering 10 years give a yearly average of 204 days on which rain fell, the daily rainfall being of 1.93 cubic meters. This amount of moisture is an essential condition for the obtainment of a good coffee crop.

"**The Mining Industry in Mexico**" is an editorial in the Engineering and Mining Journal of October 7, which deals with the present situation in Mexico and the effect of the recent political disturbances on the several mining districts, in some of which the revolution caused not even a ripple in the activities of the mines. The concluding sentence—"With the labor situation clearing and the political difficulties in a fair way of being settled, the mining industry generally is looking forward to a period of prosperity under Mexico's new régime"—shows the hopeful outlook.

The following articles in the same issue of the Journal deal with local conditions—"Mining in Tamaulipas," by W. J. Storms; "Yaqui River district of Sonora," by C. N. Nelson; and the "Problem of the Nueva Luz Shaft," by Carl Heinrich.

"**The Brazil of To-Day,**" in the Outlook, of October 21, is a thoughtful and very comprehensive article by Elbert F. Baldwin. Frequent allusions to and quotations from **The Pan American Union**, by John Barrett; "**Brazil and Her People of To-Day,**" by Nevin O. Winter; "**Brazil in 1910,**" by J. C. Oakenfull; "**Brazil,**" by Pierre Dennis; and "**Across South America,**" by Hiram Bingham, show the author's sources for much of his up-to-date information and the thorough study he has made of his subject. The commercial relations between Brazil and the United States, methods of increasing the trade, and fostering closer and even more cordial relations between the two countries form the larger part of his theme.

"**The True Romance of Panama,**" by Fullerton L. Waldo, is continued in the October number of the Bulletin of the Geographical Society of Philadelphia. This installment deals with the systematic surveys for an interoceanic waterway from the expedition of Admiral Selfridge in 1870 down to the survey made by Mr. A. G. Menocal from Greytown to Brito—the Nicaragua route—in 1885.

"**Necessary Panama Canal Legislation,**" by Emory R. Johnson, in the November North American Review, is a thoughtful study of the question as to the best policy to be pursued in the government of the Canal Zone upon the completion of the work. The author has evolved a complete plan for such government and goes into the matter at considerable length and in detail in a very interesting and convincing manner·

"**Outdoor Idling in Mexico,**" by J. A. McGuire, in Outdoor Life, is a delightfully entertaining story of hunting and fishing in the hills of Chihuahua and Sonora, including an interesting account of some of the ruins of the Cliff Dwellers and descriptions of the Tarahumara Indians, who live only in the Sierra Madre Mountains. Fourteen good photographs give added interest to the article.

"**The Hope of Art in America,**" an address made in the "Hall of the Americas" of the Pan American Union by the Hon. James Bryce, ambassador from Great Britain to the United States, is published in the November issue of Art and Progress. The address was made upon the occasion of a reception given in honor of the delegates to the second annual convention of the American Federation of Arts.

"**The Production of Cocaine in Peru,**" is an article by Sr. Alfredo Rabines, which appeared first in the Engineer, of London, and is reproduced in the September number of Peru To-Day. An editorial introduction precedes the article, giving a brief sketch of the growth and cultivation of the coca plant and cautioning against confusing this with the cacao from which cocoa and chocolate are obtained.

The main article by Sr. Rabines deals with the coca plant and a detailed description of the process and the mechanical means used in the extraction of cocaine in a typical Peruvian plant.

"**The Condition of Cuba,**" in November Lippincott's, is a critical study of economic conditions in that country as Forbes Lindsay sees them.

"**Among the Forest Indians of Paraguay,**" in the November issue of the Missionary Review, is an account by Rev. G. W. Ray, F. R. G. S., of his visit to the Caingwa sun-worshiping Indians.

"**Notes on Huntington Mills in Nicaragua**" is a technical discussion of the use of these mills for grinding gold ore in Nicaragua, by Clarence Carlton Semple, published in the October Bulletin of the American Institute of Mining Engineers.

"**Cuba as She is—An English View,**" by Mr. Sydney Brooks, in the October Forum, is an account of the island based on a thorough tour of the country. It deals with the wonderful improvement of the health and cleanliness of the towns and villages, the remarkably low death rate—the lowest but one in the world—its marvelous commercial prosperity, its unparalleled natural resources, and some of its chief industries, such as the production of sugar, tobacco growing, fruit and vegetable cultivation, etc.

In the Supplement to the American Journal of International Law, July issue, will be found the text of the "**General Treaty of Arbitration between Italy and the Argentine Republic,**" translated from the Italian by Henry G. Crocker, of the Department of State, Washington.

"**Important Points on the Export and Import Trade,**" is an address delivered by Mr. Hugh Gordan Miller, of New York, before the recent Argentina Trade Conference, which is published in full by the Shoe and Leather Reporter, of October 26, 1911. This is a most thoughtful and well digested consideration of the subject in its many aspects and replete with good suggestions for the advancement of trade between the United States and Latin American countries.

"**The Castilloa Industry in Mexico**" is an interesting article in the October issue of Tropical Life (London), dealing with the rubber trees and also incidentally with the cacao trees as cultivated in Mexico. The article is illustrated with pictures taken by Mr. Harry S. Smith, of Caledonia Estate, Tobago, on a recent trip through Mexico, Guatemala, and Panama.

"**A Sketch of the Mining Industry in Peru**" is an interesting and instructive article giving a most comprehensive account of the exploitation of Peru's wonderful mineral resources, written by Mr. F. E. Ross, managing editor of Peru To-Day, for the Mexican Mining Journal.

"**The City of Good Airs**" is the title of an interesting and profusely illustrated article by Nevin O. Winter, in the October Travel. It is descriptive of Buenos Aires in particular, and most of the illustrations are scenes in the beautiful "Paris of America."

"**Through the Beautiful Chanchamayo Valley to the Scenic Perene,**" by F. C. Whiteley, in the August Inca Chronicle, is a delightful travel story embellished by a splendid series of photographs taken by the author, some of which are exceptionally artistic and beautiful, while all are interesting and instructive.

"**The Idyl of 'Quinta Presa,' a Peruvian Viceroy and his Mistress,**" is another beautifully illustrated historical story of Peru appearing in the same number of the Inca Chronicle, written by C. Bües.

BOOK NOTES

Weltwirtschaftliche Aufgaben der deutschen Verwaltungspolitik (Economic Problems of Germany, with a Contribution on Reforms in the Consular Service). By Dr. Bernhard Harms, of the University of Kiel. 12mo, 42 pages. Gustav Fischer, publisher, Jena, 1911.

While the pamphlet deals almost altogether with commercial matters from a German viewpoint, it nevertheless shows a careful analysis of the tremendous course of international trade, and recognizes the importance of Latin America.

Bases Elementales del Diagnóstico Jeneral i Técnica de Anatomía e Histolijía Patológicas i de Medicina Legal (Elements of General Diagnosis and the Technique of Pathologic Anatomy and Histology and of Legal Medicine). By Dr. M. Westenhoeffer, professor in the University of Chile, etc., with 54 illustrations. 12vo, 271 pages. Libraría Inglesa de Hume i Cia., Santiago, Chile. Price, 17½ francs ($3.50 gold).

The study of medicine is carried on with enthusiasm in most Latin countries, and they use principally textbooks in French, but this relatively original work in Spanish (for students in the University of Chile) places the subject more immediately available for those who may prefer their native tongue in which to read their science. The book is well edited and published, and compares favorably with textbooks on similar topics from European or other American presses.

The Man Who Likes Mexico. By Wallace Gillpatrick. The Century Co., New York. 12mo, 374 pages, illustrated with 71 photographs. Price, $2 net.

The book might even be called the man who loves Mexico. It is full of the kindliness, the courtesy, the gentleness, the lightheartedness and melancholy, the abandon and trustful fatalism, the poetry and romance of Mexico. Undoubtedly the author saw many things or noticed many conditions which might detract from the delights of travel in that country, but he seldom mentions them. This statement would be true of travel in any land, be it Germany, Japan, or the United States, but the discussion of them belongs to the sociologist looking for trouble, and not to the narrator of personal experiences. The personal viewpoint is what so thoroughly interested Mr. Gillpatrick, and it is the note by which he so continuously appeals to the reader. His travels carried him across the wild mountains of Durango, into the hot country of the coast, among the native people, and into contact with the cultured residents of the larger cities. He indulges at times in somewhat guidebooky descriptions of scenes and places, but the reader detects at once the unfamiliar touch in these paragraphs and is glad when he returns to the people and the soil of Mexico. There is no effort at didactics, no preaching, no statistics. The book is merely a wholesouled expression of one man's opinion, and a successful effort to infect the reader with the charm and the humanness of a real people. Perhaps a foreknowledge of Mexico would give to the study of the book an added interest, but whether or not one knows the country, its intrinsic charm well repays the reading of it.

Paris-Rio de Janeiro—Un voyage de Noce. Par M. Georges Maldague. Edition de la Diction Française, 34 Avenue Bugeaud, Paris. Price, 3 milreis.

After a perusal of Mr. Maldague's entertaining book "A Honeymoon Trip from Paris to Rio de Janeiro," the reader is quite convinced that the only honeymoon trip really worth while is one to Brazil, so vividly does the young bride, a dainty *spirituelle* Parisian, portray in her journal, interwoven with her own love affair, the life on shipboard with its amusing and interesting descriptions of her fellow-passengers and landings at the various ports. In fact, her fund of information in regard to the country, its resources and industries, is so vast that were she less *délicieuse* one would be inclined to place her in the *bas bleu* class.

LATIN-AMERICAN NOTES

Announcement has just been made that during 1912, beginning early in May, there will be held in London, England, an Anglo-Iberian-American Exposition (*Gran Exposición Anglo-Ibero-Americana*). This is to occupy the "Great White City," which is dedicated to international exhibits of this character, and, while forming part of greater London, is really a unique section of that biggest of world's big capitals. The grounds and many of the buildings of the exhibition city were used in 1908 for a French exposition, in which the growth and development of all sides of the French Government were attractively illustrated. Visitors to London had then opportunity to study French culture in its broadest sense and the French idea most interestingly placed before them without the trouble and expense of traveling to the earth's ends, where French colonies have extended. In 1910, and under the auspices of the Japanese Government, phases of the wonderful culture of Japan were exhibited in the White City, and the still more wonderful expansion of Japan into the modern life of the twentieth century was made an object lesson to students of international affairs. Now, in 1912, the Great White City is to be converted into a paradise of Latin America, in which the progress of the Latin Republics in the Western World will be pictured. Buildings have already been named after the various republics, and others, such as the palace of art, the salon of geography, and the section of history, show general phases of Latin life. The visitor abroad during the coming summer should find this exposition one of the most interesting attractions of London.

If, however, the traveler desires to study at first hand and to convince himself of the splendidly advanced position South America occupies in the artistic, industrial, and productive movements of to-day, opportunity will be offered to make a personal visit this winter to the major part of South America. The Hamburg-American Line, following its custom established three years ago, sends out its third grand cruise to South America, leaving New York January 20, 1912, by the twin-screw steamship *Bluecher*. This vessel is of 12,500 tons, modern in every way, and constructed especially for travel in the Tropics, so that the trip is comfortable, no matter what the weather or the temperature. On this voyage the passengers are taken down the east coast, visiting Brazil, Argentina, and Uruguay. In 1912 two new features are introduced, which will add greatly to the charm of the trip as a whole. Both the Strait of Magellan and the Cape Horn route from the east to the west coast will be explored going to and returning from Chile, and it has just been decided, also, to include the Panama Canal in the itinerary, touching at Colon on the return voyage, after passing among several of the beautiful West India Islands. Full information concerning this excellent tour can be obtained from the Hamburg-American Line, 45 Broadway, New York City.

A new passenger service between San Francisco and the ports on the west coast of South America is offered to the traveling public, by the schedule of the steamship *Cuzco*, which was put on a regular north and south run early in November. The *Cuzco* is primarily a freight steamer, but differs from all others of the class in that it has accommodation for 30 passengers. Two other steamers of the same character are now building, the first of which, the *Colusa*, will arrive in San Francisco May 1, 1912. All belong to the fleet of W. R. Grace & Co.

The Salvador Steamship Co. has just added to its equipment two new steamers, the *Acajutla* and the *Jiquilisco*, which are expected to be placed in service about the beginning of 1912. They, with the *Salvador* already there, are to be engaged in passenger and freight traffic between ports in Nicaragua, Honduras, and Salvador, the northern terminus being Salina Cruz, the Pacific end of the Tehuantepec Railway. By this route the trip from the United States or Mexico City takes less than two weeks to the west coast of Central America.

SUBJECT MATTER OF CONSULAR REPORTS

REPORTS RECEIVED UP TO NOVEMBER 1, 1911.

Title.	Date.	Author.
ARGENTINA.		
	1911.	
Estimates of the next harvest	Aug. 4	R. M. Bartleman, consul general, Buenos Aires.
Regulations governing importations and sale of pharmaceutical products.	Aug. 11	Do.
"What is Argentina?"	Aug. 14	Do.
Argentine trade-mark law (continuing Mr. Bartleman's No. 533, of Aug. 5, 1911).	Aug. 28	Do.
Argentine foreign trade, transmitting vol. 11, 1909	Aug. 30	Do.
Finance report, Buenos Aires municipality, 1911	Aug. 31	Do.
The budget, 1912	Sept. 4	Do.
Trade notes: Proposed municipal loan; telegraphs closed on Sundays; bonds issued for the purpose of paying debt on drainage and water works; means of encouraging the carrying of immigrants to Argentina; statistics for Buenos Aires; loan of $67,556,000 (United States currency).	Sept. 7	Do.
Foreign commerce of Argentina, imports and exports	(1)	Do.
GUATEMALA.		
Plumbing supplies	Sept. 21	Geo. A. Bucklin, jr., consul general, Guatemala City.
License form issued motor car drivers	Sept. 30	Do.
Cancellation of concession covering a proposed enterprise for freight transportation by wagon.	Oct. 5	Do.
HONDURAS.		
Operations of the Puerto Cortes customhouse during the year 1910–11.	Oct. 4	C. I. Dawson, consul, Puerto Cortes.
MEXICO.		
Credit terms to importers in foreign countries	Aug. 10	A. V. Dye, consul, Nogales.
Sale of musical instruments in this consular district	Aug. 11	Do.
Market for American salt	Aug. 12	C. M. Freeman, consul, Durango.
Credit terms to importers	...do.....	Do.
Musical instruments	...do.....	Do.
Orange shipments from San Luis Potosi	Aug. 13	W. L. Bonney, consul, San Luis Potosi.
New railway in Mexico	Aug. 15	Arnold Shanklin, consul general, Mexico.
Market for American salt	Aug. 16	Thomas Voetter, consul, Saltillo.
Do	...do.....	A. V. Dye, consul, Nogales.
Pianos	Aug. 17	Do.
Live stock in the State of Durango	...do.....	C. M. Freeman, consul, Durango.
Imports of the consular district of Ciudad Porfirio Diaz, Mexico, for the 6 months ended June 30, 1911.	Aug. 19	L. T. Ellsworth, consul, Ciudad Porfirio Diaz.
Imports of Ciudad Porfirio Diaz	...do.....	Do.
Annual report on commerce and industries of consular district of Acapulco.	Aug. 21	M. Letcher, consul, Chihuahua.
Paints and varnishes, duties	Aug. 22	A. V. Dye, consul, Nogales.
Items of interest from Veracruz	Aug. 23	W. W. Canada, consul, Veracruz.
Statement of exports of Ciudad Porfirio Diaz for the 6 months ended June 30, 1911.	Aug. 24	L. T. Ellsworth, consul, Ciudad Porfirio Diaz.
Report on musical instruments	Aug. 25	J. H. Johnson, consul, Matamoros.
Well drilling	...do.....	M. Letcher, consul, Chihuahua.
Cotton duck and awning cloth	Aug. 26	Do.
Denatured and straight alcohol	...do.....	Arnold Shanklin, consul general, Mexico.
Pianos. Hints for American salesmen	Aug. 29	A. J. Lespinasse, consul, Frontera.
Surgical instruments	...do.....	Do.
Optical goods	...do.....	Do.
Water supply and opportunities for artesian wells	...do.....	W. W. Canada, consul, Veracruz.

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(1) Undated.

Reports received up to November 1, 1911—Continued.

Title.	Date.	Author.
MEXICO—continued.		
Vanilla	Aug. 29	A. J. Lespinasse, consul, Frontera.
Piano trade	...do.....	I. J. Johnson, consul, Matamoros.
Motor vehicles, market for	Aug. 30	A. V. Dye, consul, Nogales.
Pianos	...do.....	Do.
Sale of musical instruments	...do.....	C. B. Parker, vice and deputy consul, Mazatlan.
Mining industry in Sonora during the 6 months ended June 30, 1911.	Sept. 1	A. V. Dye, consul, Nogales.
Market for American salt	Sept. 2	L. T. Ellsworth, consul, Ciudad Porfirio Diaz.
Credit terms to importers	Sept. 4	Do.
No watch dealers in Nogales	...do.....	A. V. Dye, consul, Nogales.
Industrial notes	Sept. 6	P. E. Holland, consul, Saltillo.
Alcohol from henequen waste	Sept. 29	A. W. Brickwood, consul, Tapachula.
Extension of time for the free entry of corn in this and the adjoining States of Campeche and Yucatan.	Sept. 30	A. J. Lespinasse, consul, Frontera.
Fish supplies in the Gulf Coast	Oct. 1	W. W. Canada, consul, Veracruz.
Total declared exports to the United States from the Tampico consular district for the September quarter, 1911.	Oct. 2	C. Miller, consul, Tampico.
Exports from San Luis Potosi to the United States	Oct. 11	W. L. Bonney, consul, San Luis Potosi.
PERU.		
Peruvian-United States trade, 1910-11	Sept. 18	W. H. Robertson, consul general, Callao.
Catalogues and literature of American manufacturers and exporters.	Sept. 25	Do.
SALVADOR.		
Translation of the employers' liability act	Sept. 20	Wm. Heimke, United States minister, San Salvador.
Changes in the customs tariff of Salvador	...do.....	H. Clum, vice and deputy consul general, San Salvador.
Decree published in Diario Oficial prescribing rules applied in enforcement of the employers' liability act.	Sept. 27	Wm. Heimke, United States minister, San Salvador.
Customs tariff of Salvador: Increase in duties on cotton-stockinet underwear.	Sept. 28	H. Clum, vice and deputy consul general, San Salvador.
URUGUAY.		
A new loan for Montevideo	Sept. 5	F. W. Goding, consul, Montevideo.
The proposed International Exposition for Montevideo	Sept. 6	Do.

ARGENTINE REPUBLIC

BUDGET FOR 1912.

The minister of finance of the Argentine Republic has presented to Congress the budget for 1912. The resources are estimated at 89,281,681.37 pesos gold, 144,016,718.75 pesos paper, and 15,750,000 pesos paper in bonds. The expenditures are fixed at 29,881,303.46 pesos gold, 281,445,183.36 pesos paper, and 13,250,000 pesos paper in bonds.

The expenditures are apportioned to the various departments as follows:

	Pesos paper.	Pesos gold.	Bonds (pesos paper).
Congress	4,708,780.00		
Interior	43,790,135.43		
Foreign relations and worship	2,688,740.00	1,352,321.20	
Finance	17,858,582.48		
Public debt	14,739,572.91	28,528,982.26	
Justice and public instruction	45,776,503.81		
War	29,329,904.54		
Navy	23,029,672.00		
Agriculture	17,949,076.20		
Public works	18,500,000.00		4,000,000.00
Pensions	12,200,000.00		
Armaments and centenary	12,500,000.00		
Miscellaneous works	17,575,000.00		9,250,000.00
Total	281,445,183.36	29,881,303.46	13,250,000.00

CUSTOMS REVENUES.

The total receipts of the Argentine Government for customs duties during the first six months of the present year amounted to 43,535,308 pesos gold and 1,050,597 pesos paper. A comparison of these figures with those for the same period of 1910 shows an increase of 825,622 pesos gold and 158,187 pesos paper.

COMMERCE FIRST SIX MONTHS 1911.

During the first six months of 1911, the value of imports into the Argentine Republic aggregated 178,862,593 pesos gold, and the exports totaled 197,537,329 pesos gold, revealing a balance of trade in its favor amounting to 18,674,736. A comparison of these figures with the trade statistics for the corresponding period of the preceding year shows an increase in the value of imports amounting to 7,881,932 pesos gold, and an increase in the exports of 3,278,929.

By customhouses the imports and exports were as follows:

Customhouses.	Imports.	Exports.	Customhouses.	Imports.	Exports.
	Pesos gold.	*Pesos gold.*		*Pesos gold.*	*Pesos gold.*
Bahia Blanca	19,468,865	2,991,594	Rosario	26,595,345	18,959,431
Buenos Aires	96,727,097	140,415,757	Santa Fe	7,463,892	2,745,411
Campana	3,301,481	2,287,417	San Juan	57,710	....
Colon	3,033,448	414,627	San Nicolas	2,034,203	7,173
Concordia	4,316,947	199,126	Villa Constitucion	115,542	2,139,794
Gualeguaychu	1,090,720	69,892	Zarate	4,168,269	470,306
La Paz	412,487	40,117	Other customhouses	8,973,512	1,014,804
La Plata	18,332,200	6,316,593			
Mendoza	922,925	28,731	Total	197,537,329	178,862,593
Parana	522,686	761,820			

The exports by classifications were as follows:

	Pesos gold.
Animal products	93,376,256
Agricultural products	96,129,033
Forest products	6,280,327
Mineral products	272,338
Fisheries and hunting products	607,502
Miscellaneous	871,873
Total	197,537,329

ESTIMATED PRODUCTION OF CEREALS IN 1911–12.

A report of the department of agriculture of the Argentine Republic estimates the production of cereals in 1911 and 1912 as follows:

Wheat, area sown, 6,565,000 hectares, with a production of 6,204,000 tons; flaxseed, 1,535,000 hectares, production 1,220,000 tons; oats, area sown, 900,000 hectares, production 1,119,000 tons. These estimates represent an increase of 5 per cent in the production of wheat, and of 2 per cent in oats, as compared with the banner crop of 1907–8.

Taking these figures as a basis, the department predicts that there will be a large increase in the imports of agricultural machinery, and the railroads are already taking the necessary steps to handle this large crop by ordering a number of new cars and engines.

It is estimated that the number of laborers necessary to harvest these crops will exceed 100,000.

The threshing period is from November to March, and in years of greatest crops as many as 135,000 laborers have been employed.

REALTY TRANSACTIONS.

According to the bureau of statistics of the Argentine Republic the sales of rural property in 1910 consisted of 13,701,995 hectares, of land, valued at 359,024,595 pesos paper, as compared with 8,642,287 hectares, valued at 264,510,900 pesos paper, in 1909. There was a small decrease in the amount of land sold in the Provinces of Buenos Aires, Santa Fe, and Cordova, as compared with the previous year. A considerable increase was noted, however, in the sales of land in the other

Provinces and Territories of the Republic as compared with last year. This was especially true of Mendoza, the sales of which amounted to 1,390,249 hectares in 1909, as compared with 3,610,350 hectares in 1910. In the Pampa Central the increase in the sale of land over 1909 was nearly 200 per cent.

During the first six months of the present year 6,914 mortgages with a total value of 132,933,918 pesos were placed on property in the city of Buenos Aires, as compared with 5,747 mortgages aggregating 92,769,185 pesos during the same period of 1910. Mortgages to the value of 49,457,865 pesos were canceled during the first half of 1911, as compared with 36,472,378 pesos canceled during the same period of 1910. The prevailing rate of interest was 8 per cent per annum.

IRRIGATION ALONG THE NEGRO RIVER.

The Southern Railway, acting in conjunction with the bureau of immigration of the Argentine Republic, has amplified its plans for the irrigation of lands lying along and adjacent to the Rio Negro. The present plans include the irrigation of the whole valley of the Rio Negro between Chinchinales and Cipolleti stations, as well as the highlands in the neighborhood of the river valley. About 40,000 hectares of fine Government lands near the town of Poca will in this way be brought under cultivation, and the lands will be disposed of to actual settlers on very advantageous terms.

PLANS FOR IGUAZU FALLS PARK.

The plans for the public park at Iguazu Falls will be submitted by the municipal director of parks of Buenos Aires after a visit to the falls. It is reported that the owner of the lands adjoining this waterfall has donated the necessary land for parking purposes. The Iguazu Falls are one of the great wonders of the world, and aside from their natural beauty and grandeur, are capable of generating enormous quantities of electric power for industrial purposes.

COPPER ORES IN PROVINCE OF CORRIENTES.

A commission of the department of agriculture of the Argentine Government has discovered a deposit of copper ores in the department of Curuzu Cuatia, Province of Corrientes, about 30 meters below the surface. A rough analysis shows very promising results, and indications point to the discovery of valuable copper deposits in this part of the Republic.

TUCUMAN A HORTICULTURAL CENTER.

Although Tucuman has been chiefly noted for the production of sugar cane, recent experiments in that city and surrounding country have demonstrated the great desirability of this section for the cultivation of vegetables, fruits, and cereals. Beans, tomatoes, and Indian corn are among the staples which have been produced in considerable quantities.

INTEREST IN DRY FARMING.

Great interest is being shown in certain parts of the Argentine Republic in dry farming. The director of agricultural instruction of the department of agriculture has recently made an extended report upon this subject, in which he sets forth in detail the results obtained by the Argentine Government from experiments made in dry farming in different parts of the Republic. These experiments show that alfalfa, corn (especially Kafir corn), wheat, and other staple agricultural products can be successfully and profitably grown, according to this method of cultivation, in various parts of the country. The introduction of dry farming on a large scale into the Argentine Republic will open up a vast region in different zones of the country and will doubtless greatly stimulate immigration into those districts.

SHIPYARD FOR LA PLATA.

It is reported that the Argentine Government have entered into contract for the construction of a large shipyard and dry dock at La Plata. The arrangement provides for the construction of a dry dock of 198 meters in length, width at entrance 32 meters, and with a depth below low-water level of 30 feet. Other dry docks will be constructed capable of holding vessels of 4,000 tons register. The capital stock is given as $5,000,000, and the company will be allowed to issue debentures up to $3,000,000, with interest at 4½ per cent.

WORK ON THE BUENOS AIRES SUBWAY.

The ground-breaking exercises which marked the commencement of work on the first section of the Buenos Aires subway were celebrated in a fitting manner on September 14, 1911. The occasion was attended by a large gathering of distinguished officials, including the minister of the interior, who represented the executive power, the minister of war, the minister of navy, diplomatic officials, the mayor of Buenos Aires, and about 300 leading men of that city.

This subway is being constructed by the Anglo-Argentine Tramway Co., and will call for a network of tubes embracing three different lines. The first, upon which work was commenced on September 14, will connect Plaza Once and Plaza Mayo, along Rivadavia and the Avenida Mayo; the second section will be from Retiro to Constitucion, one line going along Florida, the other by Maipu. When these two sections are finished it is proposed to extend the subway from Once to Plaza Primera Junta, at Caballito; the third section will be from Plaza Mayo to Plaza Italia, at Palermo.

BOLIVIA

PROPOSED DOMESTIC LOAN.

In a recent special message to Congress the President of the Republic recommends that he be authorized to negotiate a domestic loan of £1,000,000, to be applied to the liquidation of the internal debt of Bolivia, which amounts to 11,500,000 bolivianos.

NATIONAL GOLD COIN.

A bill has been introduced into the Bolivian Congress authorizing the coinage of specie to the value of 15,000,000 bolivianos. Of this amount, 10,000,000 will be of 10 bolivianos denomination, and the balance of 5 bolivianos.

EXPORTS FROM SAN FRANCISCO TO BOLIVIA.

Sr. Don Ml. V. Ballivián, jr., secretary of the Bolivian legation at Washington, has kindly supplied the Bulletin with the following table showing the value of the exports to Bolivia from San Francisco for the months of July, August, and September, 1911:

Months.	Valuation.	Months.	Valuation.
July	$47,936.01	September	$45,280.34
August	32,957.28		126,173.63

HIGHER DUTIES IN BOLIVIA.

The Bolivian Chamber of Deputies have enacted a bill increasing customs duties by 50 per cent.

PARCELS POST WITH BOLIVIA.

A recent report of the Argentine consul at Tupiza, Bolivia, recommends the establishment of a parcels post and money-order service between the Argentine Republic and Bolivia. A large part of the European mail from Bolivia now passes through the Argentine Republic, and the correspondence between Bolivia and Argentina is constantly increasing. If this service is established it would prove, in the opinion of the consul, a powerful factor in promoting trade between the two countries. The Argentine Republic has a large and growing trade in the exports of wool to Bolivia, while the imports of gold and gold coin from Bolivia into the Argentine Republic are constantly increasing.

WATER AND RAIL TRANSPORTATION PROJECTS.

An enterprising and influential capitalist of Bolivia has recently submitted for the consideration of the executive power of the Republic the following extensive and far-reaching projects for the development of the transportation facilities of the country: (1) A plan for the establishment of a steamship line between Guaqui, the Lake Titicaca port through which La Paz transacts its business, to Oruro, via the Desaguadero River and Lake Poopo. Not only would this line of steamboats create new activity between the ports mentioned, but by means of smaller craft communication and commercial intercourse could be effected with the numerous lake towns and villages in the immediate vicinity; (2) the construction of a railway from Cochabamba to Chimore, the completion of which route will form the most natural and convenient outlet for Bolivian products to the Atlantic Ocean. This line would, moreover, be the means of still further uniting the commercial and social ties between the Provinces of Cochabamba, Santa Cruz, and Peni; (3) the execution of the project for the Machacamaca and Uncia Railway. Such a line would afford easy access to the sea for the exports of "barilla" tin from Unica, Llallagua, Huanuni, Morocala, and Negro Pabellon, which exports are now transported by llamas or in heavy cumbersome carts, and it would also bring about a decided economy in both time and money.

THE AYOPAYA TELEGRAPH LINE.

A telegraph line is soon to be constructed by the department of public works of the Bolivian Government through the Province of Ayopaya. The completion of this line will greatly facilitate commercial transactions in the part of Bolivia which it traverses, and will place a large territory, hitherto considerably isolated from the rest of the Republic, into rapid communication with the outside world. An active period of telegraph construction and railway building is at present quite notable in the Republic, and it is predicted by many newspapers of Bolivia that the districts affected by these improvements will soon experience an era of development and growth the beneficial influences of which will be felt over the entire country.

LA PAZ TO PUERTO PANDO RAILWAY SUBVENTION.

A bill has been introduced into the Congress of Bolivia providing for the sum of £1,200,000 to be set aside for the construction of the La Paz to Puerto Pando Railway, in accordance with the provision of clause 5 of the railway contract of May 22, 1906. The bill further provides that this amount shall be used exclusively in the construction of that line, which shall not be transferable to any other railway or railways.

BRAZIL

NEW MINISTER OF WAR.

Gen. Dantas Barreta, who has served for some time as minister of war of Brazil, has retired from the cabinet. He is succeeded by Gen. Menna Barreta, who took possession of the portfolio on September 14, 1911.

TO PROTECT THE RUBBER INDUSTRY.

President Hermes Da Fonseca has forwarded a message to Congress urging that necessary steps be taken to protect the great rubber industry of the country. Accompanying the message is a report prepared and submitted by the minister of agriculture, which points out that rubber constitutes 39 per cent of the total exports of Brazil, and recommends that protection should take the form of revised export and import duties.

TO PROTECT LITERARY PROPERTY IN BRAZIL.

A bill is before the Congress of Brazil providing for the protection of literary and artistic property, published in foreign countries, but in circulation in Brazil. Although Brazil is not a signatory power to the convention of Berne, yet according to the bill now pending it is proposed to protect scientific, literary, and artistic productions published in such foreign countries as are parties to the Berne treaty or have special treaty arrangements with Brazil. To obtain this protection the author must only prove that he complied with the laws in force in the country where the work is published.

DESTRUCTION OF NATIONAL PRINTING OFFICE.

A most unfortunate disaster in the form of fire destroyed the Imprenŝa Nacional (National Printing Department) of Brazil on September 15. At the time of the outbreak work was in full swing on the setting up and printing of the Diario Oficial, the official gazette, which appears each morning.

NEW WIRELESS STATION AT ST. THOME.

A decree of the ministry of public works provides a substantial appropriation for the erection of a strategical wireless station at St. Thome.

NEW HOTEL IN SAO PAULO.

The Government of the State of Sao Paulo has signed with the present proprietor of the "Rotisserie," one of the restaurants of

Sao Paulo, a new contract for the construction of an up-to-date hotel fitted with every modern improvement, in which the local government will have a financial interest.

PUBLIC BUILDINGS IN BAHIA.

The governor of the State of Bahia recently signed the law authorizing the construction of a palace of justice, a public library, and a State legislature building.

GEOGRAPHICAL CONGRESS.

On September 8, 1911, the Third Brazilian Geographical Congress was formally inaugurated. The opening session was attended by prominent State officials and delegates from many States and countries. These congresses have been largely responsible for the growing interest in study and explorations of Latin America and for the dissemination of information along these lines.

STUDY OF PORTUGUESE.

As a result of the tireless efforts of the Sociedade de Expansao Belga na Hespanha e America Latina, the study of Portuguese has been incorporated into the curriculum of the University at Liege (Belgium), and the Brazilian minister to Belgium, the learned Dr. Oliveira Lima, will supervise the progress of this new course.

EDUCATION IN BRAZIL.

The minister of industry and commerce, in his report on the schools of the Republic, gives the following interesting figures showing the steady development of the school system throughout the country. There are now in existence 12,221 schools with 634,539 pupils and 8,064 teachers. Of this total 6,918 are Government schools, 2,608 municipal schools, and 2,695 private institutions. The school attendance is divided into 352,418 boys and 282,121 girls.

PUBLIC INSTRUCTION AT RIO.

The inspector of public instruction of the State of Rio has just submitted an extensive report to the Government on the development and progress of the schools within his jurisdiction. The report contains much interesting information on the rapid strides which are being made in the improvement of the school system, and shows that in 1911 there were 389 schools throughout that State.

AUTOMOBILES IN BRAZIL.

The Bulletin is in receipt of information which indicates that the automobile is fast becoming an important means of locomotion in Brazil, and that automobile dealers are enjoying an exceptionally large business in the sale of machines. More than a dozen leading manufacturers of American motor cars have sent representatives with demonstrating cars to Rio de Janeiro within the past few months to take advantage of the growing business resulting from the increasing popularity of the automobile. A further evidence of the popular interest in motor vehicles is found in a Portuguese publication, which recently made its first appearance, entitled Revista de Automoveis (The Automobile Review). In this connection it may be stated that the city of Rio de Janeiro is exceptionally well adapted to the use of automobiles of all kinds. It possesses 200 miles of finely paved streets, while its magnificent boulevards present a panorama of ocean and mountain scenery surpassed by very few countries in the world. The city has a population of 1,100,000, of whom 1,500 are already owners of automobiles.

NEW INDUSTRIES.

A concession has been granted to a company to conduct a dairy business at Sao Paulo.

The "Companhia Agave Brazileiro" has received a concession from the Government to develop the cultivation of the Agave fiber plants.

PROGRESS ON MADEIRA-MAMORE RAILWAY.

In another section of this issue of the Bulletin appears an article on the inaugural festivities celebrated on September 7 and 8 in honor of the opening of the third section of this remarkable railway in the interior of Brazil. The line is now completed from Porto-Velho on the Madeira River to kilometer 220 at Abuna.

EXTENSION OF CENTRAL RAILROAD.

The Government of Brazil has adopted the plans to extend the Central Railroad of Brazil from Pirapora to Belem (Para). This project will bring the State of Amazonia into closer touch with central and south Brazil, and will shorten the time necessary for the trip between Rio de Janeiro and Belem from 12 days to 3 days. The contract for carrying out this project will be submitted for public competition.

RAILROAD NOTES.

It is reported that the Araguary-Catalao branch of the Goyaz Central Railroad has been inaugurated.

The Government of Brazil has accepted the project to construct a branch of the Central Railroad of Brazil from Cascadura to Ilha, this branch to be completed within two years.

A 25-year concession has been granted for the construction and operation of a railroad from Rio Grande to Uberaba, as a continuation of the Pontal line.

CHILE

TREATY OF COMMERCE WITH AUSTRIA-HUNGARY.

The basis of a treaty of commerce and navigation has been submitted to the Government of Chile by Austria-Hungary and negotiations are now under way for the consummation of this convention.

NAVIGATION TREATY WITH ITALY.

Both branches of the Italian Parliament have unanimously adopted a measure which has already been signed by the King, authorizing its Government to enter into a navigation treaty with Chile. This convention will provide for the establishment of a line of subsidized steamers between these two countries. The diplomatic representatives of these two nations are now engaged in effecting a suitable basis for the consummation of such a treaty.

GOLD DISCOVERY AT PUTU.

The sensational discovery of rich gold stones at Putu promises to bring to that town the title of the "Klondike of South America." The discovery of this valuable ore was, it appears, purely accidental, the result of a laborer engaged in laying the foundation of a house belonging to Francisco Rodriguez, who crushed an immense stone and, to his amazement, discovered pieces of almost pure gold flying in all directions. Surprised beyond measure his first impulse was to adopt the utmost secrecy. The secret, however, leaked out, and investigations revealed rich deposits of the precious metal. The exact spot of the new discovery is on a hill 20 minutes northward from Putu, near Constitucion. The vein of precious ore has yet to be discovered, though the abundance of stones, of incredible value, which have been extracted by prospectors, is stated to be enormous.

CONSUMPTION OF EDIBLE VEGETABLE OILS.

A consular report from Valparaiso advises that the consumption of edible vegetable oils has increased greatly in Chile during the past five years, and there seems to be a good future for them. The imports have been increased from $4,186,846 in 1906 to $6,301,902 in 1910, and the United States has enjoyed a greater percentage of this increase than any other country.

TO PROMOTE HOME INDUSTRIES.

The committee of industry and public works of the Senate of Chile has recommended that the President be authorized to contract with home factories for supplies and equipment necessary for use on the State railways. In cases where home industries are unable to meet the demands the orders may be placed with foreign concerns.

DEVELOPMENT OF THE TANNING INDUSTRY.

Under the direction of Prof. Pedro Luis Gonzalez, the noted Chilean political economist, an effort is being made to encourage the tanning industry of the country. It is aimed to obtain a bounty on exports of sole leather and dressed hides and to enter into special treaty arrangements with Germany, and countries of Central and South America for a reduction of import duties in those countries.

NITRATE PROPAGANDA IN THE UNITED STATES.

The Government of Chile, through its able representative in New York, is spreading nitrate propaganda in an effective manner throughout the United States. Printed matter is being placed in the hands of farmers and others interested in agricultural pursuits showing the desirability of using Chilean nitrate as a fertilizer. This campaign is also being carried into the agricultural schools and colleges of the United States and Canada with excellent results.

WATER AND POWER PLANT FOR VINA DEL MAR.

The Government of Chile has given its authorization for the erection of a light and power plant at Vina del Mar to supply light and power to the city. According to the terms of the concession, work on this plant must be commenced within six months from date of concession (July 27, 1911) and the entire installation must be completed within a year.

Arrangements are also being made to install pumps at El Salto with a daily capacity of over 6,000 cubic meters of water, for the purpose of furnishing water to Vina del Mar and the towns surrounding it.

RAILWAY CONSTRUCTION.

A report of the inspector general of the State railways of Chile shows that during the first quarter of 1911 there were 2,478 kilometers of railways in course of construction under the direction of the department of public works.

ORSONO TO PUERTO MONTT RAILWAY.

With the completion of the railway from Orsono to Puerto Montt, another important link was forged in the chain of railways which it is planned to extend from the southern to the northernmost point in the Republic. The completion of this line enables freight and passengers to be transported from Puerto Montt, in southern Chile, direct to Valparaiso.

COLOMBIA

ELECTION OF DESIGNATES.

On September 25, 1911, the National Congress, in joint session, elected first and second designates of the Republic, in accordance with article 10 of legislative act 3, 1910. These designates, it will be remembered, are chosen to exercise the executive power in case of the disability of the President. The Congress elected Dr. Marco Fidel Suarez and Dr. Jose Maria Gonzalez Valencia, first and second designates, respectively.

REORGANIZATION OF DEPARTMENT OF FOREIGN AFFAIRS.

An official decree provides for the reorganization of the department of foreign affairs of Colombia. By the terms of this edict the department is to be divided into four sections, an office of the subsecretary, and a general engineering and surveying section.

NEW CUSTOMHOUSE ON THE PACIFIC.

In accordance with a decree of the minister of finance and ratified by the President, the port at the mouth of the Guapi River, on the Pacific Ocean, will be opened, commencing January 1, 1912. The customhouse will be in charge of a head executive officer, who will be assisted by a staff of three assistants.

STEAMSHIP SERVICE.

The United Fruit Co. steamship service has placed in sailing between New York and Santa Marta 4 new 5,000-ton boats especially designed for the Tropics, and a Colombian navigation company has established a steamship line with two 1,000-ton vessels to ply between Tumaco and Buenaventure, Colombia, and Panama.

SALT INDUSTRY OF BARRANQUILLA AND CARTAGENA.

During the first three months of the year 1911 the gross production of salt at Barranquilla and Cartagena amounted to $151,697.93, against a total expense of $13,090.21, leaving a net product valued at $138,607.72.

IMPORTANT DISCOVERY.

An important discovery is claimed to have been made by a resident of Bogota, which promises to be of great commercial value. It is a process for manufacturing alcohol from the pulpy covering of the coffee bean. The progress and development of this discovery is being awaited with much interest.

BRIDGE OVER MANZANARES RIVER.

One of the events celebrated during Colombia's centennial anniversary of independence was the inauguration of a splendid suspension bridge over the Manzanares River. This bridge will connect Santa Marta, the capital of the Department of Magdalena, with San Pedro Alejandrino and the rich agricultural colonies of Sierra Nevada.

PRESS OF COLOMBIA.

According to the latest official reports there are 470 periodicals published throughout the Republic, distributed throughout the country as follows: Antioquia, 62; Atlantico, 29; Bolivar, 45; Boyaca, 22; Caldas, 55; Cauca, 17; Cundinamarca, 88; Valle, 39; Huila, 6; Magdalena, 15; Narino, 14; North Santander, 24; Santander, 32; Tolima, 17; and Intendency of Choco, 5.

WIRELESS STATION AT SANTA MARTA.

The Government of Colombia has granted authorization to the United Fruit Co. to establish at Santa Marta a wireless telegraphy station, either on its own land or on Government land. The station is to be similar in construction and operation to those erected by that company in Central and North America. According to the contract this does not constitute an exclusive concession. The station must be completed within one year from the date of the concession, and all material and equipment necessary for use in the construction of this station is to be exempt from customs duties.

COSTA RICA

NEW LOAN.

The Constitutional Congress of the Republic of Costa Rica has recently approved in its entirety the contract entered into between the Executive power and Messrs. Albert Hahn, of Paris; L. Behrens & Soehne, of Hamburg; and Speyer & Co., of New York, for a loan of 35,000,000 francs. The interest, at the rate of 5 per cent per annum, together with the amortization, shall be paid every six months, and the loan canceled within 40 years, beginning January 1, 1916. The loan is divided into 70,000 bonds of 500 francs each, or £19.17, or 407 marks, or $96.15. The bonds shall be known as "Republic of Costa Rica, External Loan, 5 per cent gold, 1911." The bankers have bought the full amount of the issue at the rate of 80 per cent net. To guarantee the loan the purchasers are given first lien on the revenue from the monopoly on alcohol and liquors.

NEW BRIDGES.

The department of public works of the Republic has sent an engineer to the Canton of Alvarado, Province of Cartage, for the purpose of making the surveys and plans for two bridges, one over the Birris River and another over the Pacayas River, both of which are to be built by the municipal government of this Canton.

The following new bridges have recently been completed and opened to public traffic: One over the Rio Blanco, on the national highway from the city of Liberia to the port of Ballena; another over Quebrada Grande River, and another over the Las Ciruelas River, connecting the wards of El Roble and Santiago del Oeste, of the city of Alajuela.

ROAD FROM SAN CARLOS TO NICARAGUAN FRONTIER.

By a decree of the Constitutional Congress, dated September 1, 1911, the Executive of Costa Rica is authorized to spend the sum of 6,000 colonos annually, for four years, in the construction of a road from the town of San Carlos to the Nicaraguan frontier. Any excess in the total cost of the road shall be paid by the municipal treasury of San Carlos.

CUBA

RECTIFICATION OF CENSUS FIGURES.

The figures of the general census of the Republic for the year 1910 have been definitely rectified, and as amended they show a total of 2,161,662 inhabitants for the whole island, or an increase of 58,616 over the previous year.

The population, by Provinces, in 1909 and 1910 was distributed as follows:

Provinces.	Inhabitants.		Increase.
	1909	1910	
Pinar del Rio	252,421	254,620	2,199
Habana	555,178	575,266	20,088
Matanzas	255,299	260,060	4,761
Santa Clara	499,342	514,325	14,983
Camaguey	128,669	135,340	6,671
Oriente	470,753	480,667	9,914
Total	2,161,662	2,220,278	58,616

As corrected, the population of the city of Habana in 1910 was 319,884.

DEMOGRAPHIC STATISTICS, 1910.

The civil registry of the Republic of Cuba shows that during 1910 there were recorded for the whole territory of the island 12,846 marriages, 74,286 births, and 33,194 deaths, or a balance in favor of the population of 41,092 inhabitants. The rate of mortality for 1910 was 14.95, which continues to place Cuba among the healthiest nations of the world.

DECREE ON MINING.

The President of Cuba has issued a decree regulating the procedure to be observed in the dispatch and disposal of petitions for mining concessions in cases of claims situated within public reservations.

DELEGATE TO INTERNATIONAL CONGRESS OF ORIENTALISTS.

The President of Cuba has appointed Sr. Dr. Juan Miguel Dihigo, professor at the University of Habana, as the delegate of the Republic to the Sixteenth International Congress of Orientalists, to be held in Athens, Greece, April 7 to 15, 1912.

APPROPRIATION FOR SANTIAGO AQUEDUCT.

By presidential decree of August 30 last the sum of $90,000 is appropriated for the continuation of the works now being carried on in San Juan Valley. An adequate water supply for the city of Santiago de Cuba, as well as the purchase of a new boiler, are covered in this project.

AQUEDUCT FOR GUIRA DE MACURIGES.

The department of public works of the Republic of Cuba has approved the contract entered into between the provincial government of Matanzas and Caballol & Co. for the construction of an aqueduct in the town of Guira de Macuriges.

DOMINICAN REPUBLIC

NEW LAWS.

The Federal Congress of the Dominican Republic has passed a law merging into one political division the communes of Santo Domingo, San Carlos, and Villa Duarte. Another law makes the French Codex of September 15, 1908, the official pharmacopœia of the Republic.

FIRST DOMINICAN MEDICAL CONGRESS.

The first Dominican Congress of Medicine and Surgery was held in Santo Domingo, the capital of the Dominican Republic, from the

10th to the 14th of September last. It is the unanimous opinion of both the press and public of the country that its results will be highly beneficial to the Republic. The program consisted of the consideration and discussion of 37 subjects, prominent among which were those dealing with tropical pathology, general biology, internal clinics, pediatrics, chirurgical clinics, etc.

DELEGATES TO FIFTH INTERNATIONAL SANITARY CONFERENCE.

Sr. Licenciado Tito V. Lisoni and Sr. J. Ramon Campos, consul general and consul, respectively, of the Dominican Republic at Santiago, Chile, have been appointed delegates to represent their Government at the Fifth International Sanitary Conference of American Republics to be held at the Chilean capital in November next.

ECUADOR

NEW CABINET.

The new Ecuadorean cabinet, as recently reorganized by President Emilio Estrada, is at present constituted as follows:

Minister of the interior, Sr. Don Octavio Diaz.
Minister of foreign relations, Sr. Don Julio Arias.
Minister of public instruction, Sr. Don Carlos Rendón Pérez.
Minister of the treasury, Sr. Don Federico Itriago.
Minister of war and navy, Col. Juan Navarro.

MILITARY INSTRUCTION BY GERMAN OFFICERS.

Steps have been taken by the Federal Congress authorizing the President of the Republic to negotiate with the German Government for the services of a number of military experts to assist in the reorganization of the military forces of the Republic and to give instruction in the local military schools.

IMPORTATION OF FINE STOCK AND POULTRY.

There have recently been imported into Ecuador from the United States a number of Holstein cattle, blooded horses, fine sheep, and choice poultry to be used for breeding purposes on some of the farms of the Republic. It is thought that by crossing this stock and poultry with the native animals and fowls an improved and hardy type can be developed which will be suited to the climate of the lowlands and tablelands of Ecuador. Many of the picturesque, well-watered, and grassy valleys of Ecuador form ideal locations for the raising of stock of all kinds, and the opportunities for development and extension along this line are practically unlimited.

SANITATION AND SEWERING OF GUAYAQUIL.

The President of the Republic of Ecuador has addressed a special message to the Federal Congress at Quito on the sanitation and sewerage of Guayaquil. The Executive recommends that this subject be carefully discussed and that action be taken for the speedy sanitation of this principal port of the Republic. The loan proposed for this purpose by a foreign syndicate will also be considered by the Congress, and the President expresses the hope that a law will be enacted before the adjournment of the present session settling this important question in a manner beneficial to the needs of that port and to the interests of the nation.

PUERTO BOLIVAR TO BIBLIAN RAILWAY.

A petition has been presented to the Federal Congress of Ecuador requesting the approval of the contract for the construction of a railway from Puerto Bolivar to Biblian. The construction of the railway referred to is greatly desired by the inhabitants of the towns and surrounding country through which it will pass, and its completion will greatly stimulate the business of that section and aid in the development of the entire country contiguous to and tributary to the line.

REORGANIZATION OF AMBATO TO CURARAY RAILWAY.

A bill recently introduced into the Congress of Ecuador provides for the reorganization of the board in charge of the construction and administration of the Ambato to Curaray Railway.

GUATEMALA

NEW EXECUTIVE POWERS FOR FINANCIAL REFORM.

The National Legislative Assembly of Guatemala has given the President of the Republic full authority to contract and convert loans, levy taxes, amend tariffs, modify the budget, and enact such provisions as he may deem wise for the speedy adjustment and reorganization of the financial situation of the country, and for the amortization of the public debt. The President is required to report to the next session of the legislature the results attained by exercise of this prerogative.

SPECIAL MISSION TO SALVADOR.

Having accepted the invitation of the Government of Salvador to participate in the celebration of the one-hundredth anniversary of the first cry of Central American independence, to be held in the city of San Salvador on November 5, 1911, the President of Guatemala has resolved to accredit a special mission near the Salvadorean Government. Sr. Licenciado Alberto Mencos has been designated envoy extraordinary and minister plenipotentiary on special mission, and Sr. Licenciado Francisco Quinteros A., secretary.

The faculty of law of the University of Guatemala has also appointed Sr. Mencos as its delegate to the special session to be held by the University of San Salvador on that date.

DELEGATES TO INTERNATIONAL CONGRESSES.

The President of Guatemala has appointed the following delegates to represent the Government of the Republic at the international congresses indicated below:

Sr. Tomas Segarini, delegate to the Exposition of Hygiene to be held in Rome from September 1 to December 31, 1911. Sr. Manuel R. Ortega and Sr. Victor Sánchez Ocaña, delegates to the Pedagogical Congress to be held in San Jose de Costa Rica on December 1, 1911.

DELEGATES TO CENTRAL AMERICAN MEDICAL CONGRESS.

President Estrada Cabrera has appointed Dr. Mario J. Wunderlich and Dr. Nemesio Moraga delegates to represent the Government of Guatemala at the First Central American Medical Congress. This gathering will be held in the city of San Salvador, the capital of the Republic of Salvador, and the opening session will be on November 5, 1911, the one-hundredth anniversary of the first cry of Central American independence.

CENTRAL AMERICAN PRESS CONGRESS.

The preliminary Association of the Central American Press, composed of La Republica, of San Jose, Costa Rica, El Diario de Nicaragua, of Managua, El Nuevo Tiempe, of Tegucigalpa, Honduras, El Diario del Salvador, of San Salvador, and El Diario de Centro-America, of Guatemala City, held a congress of newspaper men in the city of Guatemala during the Minerva festivals, October 29–31, 1911.

MONUMENT TO HIDALGO.

On September 16, 1911, the anniversary of Mexican independence, there was unveiled in the city of Guatemala a monument erected by the Government of that Republic to the memory of Hidalgo, the father of Mexican independence. There were present at the ceremonies President Estrada Cabrera, the Mexican minister, high officials of the Government, and many members of the diplomatic and consular corps.

AGRICULTURAL PRODUCTION IN 1910.

According to figures recently issued by the bureau of statistics of the Republic of Guatemala, the agricultural production of the country during the year 1910 was valued at 428,825,081.50 pesos Guatemalan currency, of which 92,705,680 pesos were for coffee, 66,880,800 pesos for maize, 30,783,303 pesos for timber, and 12,998,850 pesos for wheat.

PROPOSED ELECTRIC TRAMWAYS FOR THE CAPITAL.

Messrs. Carlos Tümmeler and Jose Salazar have submitted to the minister of promotion of Guatemala a proposition to establish in the city of Guatemala a service of electric tramways in lieu of the system of tramways now operated in the capital.

HAITI

REDEMPTION OF THE INTERNAL DEBT.

Le Moniteur, in its issue of September 20, republishes the law enacted during the previous administration relative to the redemption of the internal debt of the Republic of Haiti. Under its provision (published in the January, 1911, issue of the Bulletin) redemptions will be effected at the following rates: The 6 per cent consolidated debt at 55 per cent; the 3 per cent consolidated debt at 27 per cent; the 6 per cent loans, known as provisional, at 54 per cent; loans of January 10, 1903, at 54 per cent; blue certificates at 25 per cent; pink certificates at 25 per cent. The certificates delivered for the settlement of diplomatic claims by virtue of arbitral awards will be settled by agreement of the holders of these certificates and the department of finance. The balance of the loan of August 20, 1909, will also be redeemed by agreement with the department of finance.

STEAMSHIP REGULATION.

An official circular has been issued by the minister of finance to all agents of steamship lines doing business in Haiti, directing attention to the law which requires that there be furnished to the director of customs, not later than three months after shipment, a true and attested statement of the weight and values of all goods shipped through that port.

WIRELESS STATION ON AMERICAN LEGATION.

Work has been commenced on the construction of a wireless telegraph station over the legation of the United States at Port-au-Prince. This installation will bring the island into closer touch with the outside world, and into immediate communication with the American naval port at Guatanamo and into closer touch with the outside world.

TO DEVELOP WATERFALLS.

A concession has been requested for a period of 25 years to exploit and develop the waterfalls within a radius of 25 miles of Petion Ville and to establish a water and power plant for the generation of electric current.

HONDURAS

DELEGATES TO CENTRAL AMERICAN MEDICAL CONGRESS.

The faculties of medicine and pharmacy of the Republic of Honduras have selected Dr. Teofilo Zelaya Flores and Dr. Samuel Laines as delegates to the Central American Medical Congress held in San Salvador on November 5, 1911.

CENSUS OF 1910.

The Pan American Union has just received a résumé of the census of Honduras taken in 1910. The following table shows the population of the Republic from 1791 to 1910, inclusive:

Years.	Population.	Increase between censuses.	Average annual increase.
1791	93,501		
1801	130,000	36,499	3,649
1826	200,000	70,000	2,800
1850	350,000	150,000	6,250
1881	307,289	42,711	1,377
1887	381,938	74,649	12,441
1895	398,877	16,939	2,117
1901	489,367	90,490	15,081
1905	500,135	10,768	2,692
1910	553,446	53,311	10,662

PROPOSED RAILWAY THROUGH REPUBLIC.

The department of fomento and public works of Honduras has received the draft of a contract for the construction of a railway from Puerto Teloa, on the northern coast of Honduras, to Zacate Grande Island on the Gulf of Fonseca. According to the plan, the railway will traverse the entire Republic, passing through Tegucigalpa, and branches will extend through the principal towns to the boundaries of Guatemala, Salvador, and Nicaragua. The concessionaire agrees to construct at his own expense a wharf provided with lights and guardhouse at each terminal of the line and also to erect custom and ware houses for the account of the State. The concessionaire further agrees to submit to the Government a preliminary report and sketch of the railways, as well as a definite drawing of the first 20 kilometers, repeating this report each four months until the line is completed. Preliminary work must be commenced within a year from date of contract, while the construction of the wharves and buildings must be completed within four years. The Government is to receive 5 per cent of the net profits of the railway, and agrees not to grant a concession to any parallel railway within a distance of 80 kilometers from either side of its line.

MEXICO

ELECTION OF PRESIDENT AND VICE PRESIDENT.

On October 2, 1911, Sr. Don Francisco I. Madero and Sr. Jose Marino Pino were elected President and Vice President, respectively, of the Republic of Mexico.

MESSAGE OF THE PRESIDENT.

On September 16, 1911, Provisional President Francisco Leon de la Barra read an important message covering the fiscal year 1910–11 at the convening session of the Twenty-fifth Congress. Relations with foreign countries, the message stated, continue unimpaired and are being developed in the same spirit of true friendship that has characterized them in the past. The principal treaties and conventions concluded were next enumerated. The department of gobernacion (interior), the message stated, was also particularly active during this period and many public works and improvements were undertaken. During the year Mexico accepted numerous invitations to participate in a number of international congresses and has appointed delegates to the Oriental Congress which will meet in Athens in 1912, to the Universal Congress of Races at London, to the International Congress of Music at Rome, and to the International Congress for the Control of the Use of Alcohol.

During the first half of 1911 deeds were issued covering 257,198 hectares of land, and the revenue from same amounted to 273,898 pesos.

The Geographic Exploration Commission has completed its investigations in the States of Sonora, Durango, Hidalgo, Oaxaca, and Yucatan and has finished several sections of the general map of the Republic and commenced the compilation of other sections.

Two important new industries, continued the President, have been established: The manufacture of chemically pure carbonate of soda and of waterproof cloth. Contracts were also made for the exploitation of guano deposits and salt mines. During the second half of the last fiscal year deeds were issued covering 14,808 mining properties and requests were made for 152 concessions and confirmations of water rights, irrigation projects, and generation of power for industrial uses. During the same period 576 patents and 36 industrial trade-marks were granted, while 455 commercial labels and 85 commercial names were registered.

The increase in Government-controlled railways since April 1, 1911, was 71 kilometers, making the entire system at the time of the delivery of the message 19,877 kilometers. This, added to the 4,840 kilometers of privately controlled railways, makes the total railways of the Republic 24,717 kilometers.

The following important railway concessions are now under consideration: From Balasas on the Mezcala River to the ports of Sihuatanejo and Acapulco; from Vera Cruz to Tampico via Tuxpam, and the continuation of the same to the northern frontier; the extension of the railway concession from Santa Lucrecia to Campeche, connecting the Yucatan railways with the rest of the Republic. The number of post offices in the Republic is given as 2,858, and the pieces of mail matter handled during the second half of the last fiscal year were 101,000,000, which, added to those in circulation during the previous six months, made a total for the year of 200,000,000 pieces. The issuance of domestic postal money orders from January to July, 1911, amounted to 24,300,000 pesos, and for the fiscal year 1910–11 to 53,000,000 pesos. The international money-order business for the first half of 1911 amounted to 5,902,000 pesos, of which 3,045,000 pesos were drawn on foreign countries and 2,857,000 pesos by foreign countries on Mexico. During the last fiscal year this business aggregated 13,071,000 pesos, 5,898,000 pesos of which were issued by Mexico on foreign countries and 7,173,000 pesos were issued by foreign countries and made payable in Mexico.

The revenues of the postal department amounted to 2,214,000 pesos for the first half of 1911 and for the fiscal year 1910–11 to 4,724,000 pesos. The postal money-order convention with Cuba became operative in October 1911. Modifications of the parcels-post convention with the United States and Germany were signed during the year.

From January to June, 1911, telegraph wires were laid to the extent of 4,127 kilometers, which with changes, discontinuations, and shortening of other lines, represents an estimated increase of 2,691 kilometers. Four new telegraph and two new telephone offices were established.

A wireless telegraph station was inaugurated at Bacochibampo, near Guaymas, which places that point in communication with Santa Rosalia, Lower California. Wireless stations are successfully operating at Vera Cruz and Campeche, and stations will be established at San Quintin, Magdalena Bay, and Loreto, in Lower California.

The customs revenues for the fiscal year 1910–11 increased to the amount of 1,767,000 pesos over those of the previous fiscal year.

EXPORTS OF COPPER, FIRST HALF OF 1911.

The exports of copper from Mexico during the first half of 1911 amounted to 352,070,445 pounds, shipped to the following countries:

Countries.	Pounds.	Countries.	Pounds.
Holland	106,047,446	Italy	16,932,185
Germany	88,614,552	Russia	9,471,644
France	58,444,222	Sweden	3,375,525
Great Britain	48,660,115	Canada	2,127,638
Austria	17,926,028	Other countries	471,090

NATIONAL RAILWAYS IN 1910–11.

Recent official reports show that the receipts, expenditures, and net profit of the National Railways and Interoceanic Railway of Mexico in 1910 and 1911 were as follows:

NATIONAL RAILWAYS.

Years.	Receipts.	Expenditures.	Profits.
1910	$61,483,147.42	$36,728,318.36	$24,754,829.06
1911	61,934,421.05	39,279,344.57	22,655,076.48

INTEROCEANIC RAILWAY.

1910	$8,637,845.17	$5,453,527.24	$3,184,317.93
1911	8,864,282.44	5,676,351.21	3,187,931.23

There was a decrease of 2,099,752.58 pesos in the net profits of the National Railways in 1911, as compared with 1910, and an increase of 3,613.30 pesos in the net earnings of the Interoceanic Railway in 1911, as compared with 1910.

NEW STEAMSHIP LINE.

A consular report from Tampico advises that the American & Cuban Steamship Co. has inaugurated a freight service between New York and Mexico, visiting the following ports: Tampico, Progreso, and Vera Cruz.

INDUSTRIAL POSSIBILITIES.

Various consular advices from the mining districts of Mexico indicate possibilities of trade in such products as pipes, valves, cocks and fittings, and other appurtenances of mining machinery.

MOTOR BOATS AT TAMPICO.

A consular advice from Clarence A. Miller, Esq., the United States consul at Tampico, states that so extensive has the sale and use of motor boats become in his district that already there has been established a motor-boat garage and repair shop under the name of the Mexican Boat Co.

ALCOHOL FROM HENEQUEN WASTE.

A report from Albert W. Brickwood, jr., the United States consul at Tapachula, states that an invention which will be of great interest to the planters of henequen or sisal hemp, as well as of practical utility to the world at large, has lately been patented by a Mr. Ernesto D. Castro, a native of Tabasco, but resident for some years in Yucatan. It is a process for utilizing the residue of the maguey, after the fiber has been taken, for the manufacture of alcohol.

TAMPICO NOTES.

The United States consul at Tampico reports that among the new industries being established at Tampico is a modernly equipped machine shop and a power plant at Micos Falls. The flour mill which has been under construction for over a year has recently been completed and is now in operation. This is an entirely new industry for Tampico and is regarded as a great addition to the community.

NICARAGUA

PRESIDENTIAL ELECTION.

On October 7, 1911, the Congress of the Republic of Nicaragua elected Gen. Luis Mena President of the Republic for the constitutional period from January, 1913, to December, 1916.

RATIFICATION OF LOAN.

The Congress of Nicaragua ratified on Octobor 9, 1911, the loan proposed by American bankers amounting to $15,000,000. The plans of the Government embrace a reform of the monetary system, the establishment of an American bank, and the construction of a transcontinental railway. The loan is secured by a guaranty of 50 per cent of the customs duties.

LICENSE OF NEW COMMERCIAL AND INDUSTRIAL ESTABLISHMENTS.

The Official Gazette of August 12, 1911, contains a presidential decree of July 28, imposing a tax or license, payable once only, on commercial and industrial establishments of all kinds that enter business for the first time in the capital of the Republic.

COAST LINE RAILWAY.

The President of the Republic, acting in conformity with the views of the Cabinet, approved on August 5, 1911, the contract submitted by the representative of the United Fruit Co. for the construction of a railway from Bluefields Bluff north to the Cooringwar River, and passing on the west by the Laguna de Perlas. The term of the concession is 85 years, after which time the railway is to become the property of the State. A 50-meter right of way is granted the railway company, and authority is given it to take up 50,000 hectares of public land.

PANAMA

APPOINTMENT OF DELEGATE TO THE FIFTH SANITARY CONFERENCE.

The Government of Panama has appointed Dr. Manuel C. Vidal as its delegate to the Fifth Sanitary Conference of American Republics, held at Santiago, Chili, from the 5th to the 12th of November, 1911.

POPULATION OF PANAMA.

The census returns from the Republic of Panama are practically all completed, and advance figures have recently been issued. These figures show the total population of the country to be 336,742, as compared with 285,000, the enumeration at the last census in the seventies. This does not include the Canal Zone, the population of which in 1908 was 50,003. A new census is now being taken by the Canal Zone Government, and it is expected that the new count will show about 75,000 in the 10-mile strip.

The figures give to the city of Panama a population of 35,368 inhabitants, of which 18,213 are male and 17,155 female. The city of Colon has 17,748 inhabitants, of which 9,260 are male and 8,125 female.

WHARFAGE CHARGES.

Decrees of the President of Panama of August 19 and 26, 1911, regulate the wharf charges at Aguadulce and Puerto de Pedregal, respectively.

PARAGUAY

ELECTION OF PRESIDENT.

With the resignation on July 5, 1911, of Col. Albino Jara, as Provisional President of Paraguay, the National Congress chose Senator

Liberato M. Rojas to fill the office until a formal election might be held. In the election which was held the last part of September it was voted to extend the term of Provisional President Rojas to 1914.

NEW CABINET.

It is announced that President Rojas has designated the following cabinet:

Minister of foreign relations and acting minister of the interior, Dr. Alejandro Audibert; minister of the treasury, Sr. Francisco Bareiro; minister of war and navy, Sr. Cipriano Ibañez; minister of justice, religion, and public instruction, Dr. Federico Codas.

BENEVOLENT SOCIETY AT CONCEPCION.

A benevolent association has been formed at Concepcion, Paraguay, under the name of "Damas de Beneficencia pro Hospital." The object of this organization is to erect a hospital on its own land and to care for the needy and indigent sick without charge. The society will also provide for and educate such orphans as come within their care.

TO COMPLETE ORATORIO.

According to the press of Paraguay, steps have been taken to complete the magnificent building known as the "Oratorio of the Virgin of Asuncion," commenced some years ago. This edifice is noted for the beauty of its architecture, and is one of the most imposing buildings of the metropolis of the Republic. Bids for completing the work have been called for by the department of public works.

THE NEW YORK & PARAGUAY CO.

"El Tiempo," of Asuncion, in a recent issue, publishes the full text of the articles of incorporation and by-laws of the New York & Paraguay Co., a stock company organized under the laws of the State of New York, on November 30, 1910, for the purpose of engaging in business in Paraguay. This company proposes to export tannin, extracts of tannin, timber, hides, and all kinds of raw and manufactured products, and to import such goods, merchandise, machinery, and live stock as it deems desirable to bring into the country for sale or for the purpose of developing the industries of the nation.

NEW COLONIZATION COMPANY.

On March 20, 1911, a new colonization company entitled "La Colonizadora" was organized in Asuncion, Paraguay. The company is to deal in real estate and live stock. It will also aid and encourage stock raising and the development of agricultural lands.

PERU

PROPOSED MUNICIPAL LOAN.

The municipality of Lima proposes to negotiate a loan of £500,000 (with the bank of Peru and London and W. R. Grace & Co.) for the purpose of consolidating and converting the debt of the city, and in order to enable it to actively continue the construction of necessary public works. The loan is to be secured by certain municipal revenues, and is negotiated at the rate of 87 per cent, 5 per cent interest and 1 per cent amortization.

WIRELESS TELEGRAPH INSTALLATION AT LIMA.

A wireless telegraph station has been established in the main telegraph office at Lima under the direction of the Peruvian wireless telegraph operator and inventor, Señor Bernardo Camino. This installation enables wireless communication between Lima, the port of Callao, and ships in the neighborhood of that port.

INFORMATION ON THE PROVINCES OF THE REPUBLIC.

"El Diario," of Lima, is publishing in its Sunday editions an interesting series of articles on the Provinces of the Republic. The first of these articles treats of the Province of Tumbes, and in a pleasing style describes its geography, coast line, rivers, mountain ranges, population, and natural products. Other similar articles, illustrated with maps and drawings, will follow, until the whole Republic is covered. The Diario is to be congratulated on this practical and effective manner of diffusing knowledge concerning Peru among its large list of subscribers both at home and abroad.

COMMERCE WITH UNITED STATES, 1910-1911.

A report from the United States consulate general at Callao, Peru, gives the total trade of the United States with Peru for the fiscal year ended June 30, 1911, as $14,911,153, the largest total reached in the commercial relationship between these countries. The exports from Peru to the United States are given at $5,597,123 and the imports into Peru from the United States at $9,314,030.

EDUCATION OF PERUVIANS IN THE UNITED STATES.

The consul general of Peru in New York has submitted an interesting report on the economic and trade conditions, etc., of the

United States for 1910. This report has been published in part in "El Diario," of Lima, and contains a vast amount of useful statistical data and other information.

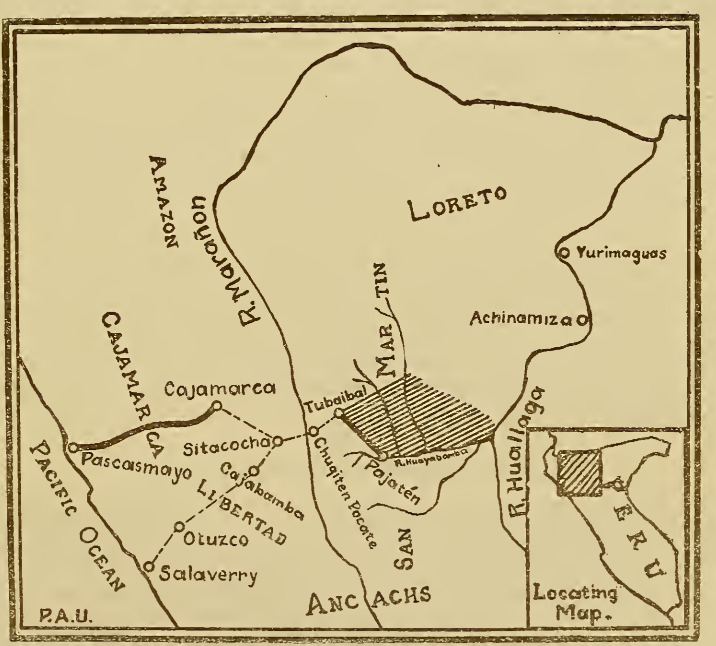
A paragraph of this report dealing with the education of Peruvians in the United States states that the advantages offered to Peruvian students in the colleges and universities of the United States are of such a nature as to enable students to obtain the particular kind of instruction that may be best adapted to their respective qualifications, and under conditions that insure the most satisfactory progress. The consul general kindly offers his services to Peruvian parents who desire to place their children in educational institutions in the United States.

At the present time there are about 120 Peruvian students studying in the various institutions of learning in the United States, among whom there are six who have scholarships from the Peruvian Government.

PERUVIAN COLONIZATION PLAN.

The following free translation of an article appearing in "El Comercio," of Lima, has been submitted by the consul general of the United States at Callao, W. Henry Robertson, Esq.:

Messrs. Mirko and Stevo Seljan, having concluded the arrangements for which they have been staying in Peru, are now going to the United States, via Panama, to interest the numerous South-Slavic residents there in the colonization of the valley of the River Huayabamba. The Messrs. Seljan have obtained from the Peruvian Government a concession, the general terms of which are as follows:



TERRITORY TO BE DEVELOPED BY COLONIZATION.

"The concessionaires obligate themselves to build a bridge near the village of Chiquiten over the river Maranon [Amazon]; to construct a bridle path about 100 kilometers (62.137 miles) long from the ravine of Tubaibal up to the village of Pajaten on the River Huayabamba; to colonize the valley of this river. On the other hand, for each sol (Peruvian silver) invested in the public works just mentioned, the concessionaires will receive from the Government possession of 11,500 square meters (13,754 square yards) in lands of the Montana region; the Government will grant a free passage for each one of the colonists introduced by the concessionaires; it agrees to cede to the concessionaires 50 hectares (123.55 acres) of lands of the Montana region for each family introduced."

The lands referred to are situated between the Departments of Amazonas, La Libertad, Ancachs, and Loreto, and are by their geographical position most favorable for the union of the Amazon district with central Peru and on toward the Pacific. The ports of the Pacific corresponding to the projected bridle path or trail are those of Salaverry and Pacasmayo. The railway now being constructed from Pacasmayo to Cajamarca will soon unite this latter city with the Pacific coast. From Cajamarca to Tubaibal will consume six to seven days, traversing a populated zone, and from there Pajaten will be reached by the projected trail, from which one will descend in boats, via the Rivers Huayabamba and Huallaga, as far as Achinamiza, the terminus of steamship navigation for the entire Amazon section. This will be one of the shortest and most convenient routes of communication between the Pacific and the Atlantic.

SALVADOR

CENTENARY CELEBRATION.

The Government of Salvador, through the department of foreign relations, extended a cordial invitation to all the Republics of Central America to participate in its centenary celebration, which was celebrated with fitting and appropriate exercises on November 5, 1911.

APPOINTMENT TO HAGUE ARBITRATION COURT.

The President has appointed Dr. Alonso Reyes Guerra, the consul general of the Republic of Salvador in Germany, as the representative of Salvador to the permanent arbitration court at The Hague, to succeed Señor Santiago Perez Triana.

NEW ISSUE OF REVENUE STAMPS.

An executive decree of August 7, 1911, authorized that there be engraved at the National Bureau of Engraving and placed in circulation a new issue of revenue stamps to take the place of that of 1905. These stamps, which amount to 400,000 pesos, were placed in circulation on September 15, 1911, and are of the following denominations and colors:

Amounts.	Denominations.	Color.
Pesos.	*Pesos.*	
50,000	50	Dark violet.
25,000	25	Dark red.
50,000	10	Pale violet.
50,000	5	Orange.
50,000	1	Pale red.
50,000	.50	Dark blue.
50,000	.25	Dark coffee.
30,000	.10	Dark green.
25,000	.05	Pale yellow.
10,000	.02	Gray.
10,000	.01	Green.

SPECIAL MARKING OF SHIPMENTS.

An executive order has been issued prohibiting the use of the Government mark on shipments by private persons or companies. In the future goods consigned to the Government should be marked "G. del S.," to which should be added the office or department for which the goods are intended.

REGULATION ON FRESH FRUIT.

A recent executive decree specifies that fresh fruits imported into the country and not registered or called for within 15 days after arrival will become the property of the Government. Fifteen days is the legal period for storage.

CENTRAL AMERICA STUDENTS' CONGRESS.

The Central America Students' Congress, to which all of the Republics of Central America were invited, assembled in the city of San Salvador during the centenary celebration of that Republic in November, 1911.

ACCEPTANCE OF PLANS FOR NATIONAL THEATER.

The board of public works of Salvador has approved the report and recommendation of the technical commission appointed to render an opinion on the 16 plans submitted in the international competition for the construction of a theater at San Salvador. The first prize was awarded to Daniel Bylard and the second prize to E. Robert. Arrangements were made for the laying of the corner stone on November 5, 1911.

NEW TELEGRAPH OFFICE.

The general telegraph bureau has opened to public service a telegraph office in the town of Nueva Granada, Department of Usulutan.

APPARATUS FOR METEOROLOGICAL STATIONS.

The department of public instruction has ordered the necessary apparatus for the equipment of meteorological stations in the Republic, with the object of informing agriculturists of climatic conditions, changes in the weather, etc.

NEW BRIDGE.

The Congress of Salvador has passed a law providing for the construction of a stone and cement bridge over the San Francisco River in the town of the same name. The highway to Yamabel and Guatajiagua, via San Salvador, will pass over this bridge. The national highway fund collected by the Department of Morazan will be used for this work.

UNITED STATES

SUGAR EXPERT FOR ARGENTINA.

Prof. T. C. Barber, the noted entomologist of the Louisiana State University, has been engaged for a period of three years by the Sugar Planters' Association of the Argentine Republic. He sails for his new post on December 1, and will devote his energies to the study of insects which attack the sugar cane in the northern part of Argentina, where the sugar industry is making remarkable progress.

RARE AZTEC MANUSCRIPTS.

The American Museum of Natural History has recently acquired an interesting collection of fragments of ancient Mexican manuscripts. These relics were taken from the walls of a church at Tlalquiltenango, Morelos, and are about a hundred in number. They represent parts of several manuscripts on maguey paper, and probably date from soon after the arrival of the Spaniards. The church at Tlalquiltenango was completed in the year 1540, and the manuscripts had apparently been collected by the priests and pasted face down on the walls of the cloisters instead of being destroyed outright as was the usual custom. The collection is considered of peculiar value because the point of origin is so clearly indicated.

URUGUAY

ENLARGEMENT OF VETERINARY SCHOOL.

The Government veterinary school of Uruguay is to be enlarged shortly, and $280,000 have been appropriated for new buildings and land space. The annual fund for maintaining this institution has also been increased by $20,000.

INTERNATIONAL EXPOSITION FOR MONTEVIDEO.

A consular dispatch from Consul Frederic W. Goding, at Montevideo, states that a proposition has been laid before the Government to organize an international exposition there for the summer of 1912. The plans include a great number of exhibition buildings to be devoted to the display of the natural and commercial wealth of the Republic, a midway with all its delights and pleasures, ornamental lakes, islands, bridges, etc. The total cost of the project is estimated at $940,000, which covers the expenses of preliminary organization by experts in this work. The only cost to the Government is that of providing accommodations for and the clerical staff to carry out the ordinary routine work. Negotiations are now in the hands of Mr. H. C. Lichtenberger, of Montevideo.

LOAN FOR MONTEVIDEO.

Another consular advice from the same source indicates that a proposal has been presented for creating a loan of 4,000,000 pesos (1 peso = $1.034) at 5 per cent interest with 1 per cent amortization, the product of which would be applied to the extension and improvement of the hospitals and other benevolent institutions of the country. Special taxes will be levied to pay off the loan.

THE VEHICLE LICENSE.

An executive decree has been issued regulating the tax on vehicles for the year 1911–12. This tax is payable from September 1 to 30 in the capital of the Republic, and from September 15 to October 15 in the interior. The decree contains some modifications concerning the basis of the tax on automobiles, which are now taxed according to their horsepower. The payment of the license on automobiles entitles them to travel in any part of the Republic.

COMPULSORY VACCINATION BILL.

A bill has been introduced into the Congress of the Republic of Uruguay making vaccination compulsory.

PROPOSED GEOGRAPHICAL SECTION.

The President of the Republic of Uruguay has presented a bill to the Congress recommending the establishment of a geographical section under the direction of the army staff office. The object of this bill is to give technical military assistance in making surveys for public purposes.

NEW LINE OF STEAMERS.

Lamport & Holt have established a line of steamers between Lisbon, Portugal, and Montevideo. These steamers will make regular trips touching at Rio de Janiero. They are modern in construction and adapted to freight, mail, and passenger traffic.

TOPOGRAPHICAL COMMISSIONS.

Three topographical commissions have been established by the department of public works of Uruguay to assist in rearranging the boundary with Brazil in cooperation with the Brazilian Government and in accordance with the recent treaty between Uruguay and Brazil. Each of these commissions is to consist of a surveyor and a number of assistants.

CONTROL OF SEAL FISHERIES.

The initiative has been taken by the minister of foreign relations of Uruguay for the negotiating of a convention between Uruguay, Argentina, and Chile for the control of seal fishing and the protection of seals from extermination. It is said that the diplomatic representatives of Chile and the Argentine Republic accredited to the Government of Uruguay in Montevideo are favorably disposed toward such a convention.

INCREASE IN SALARY OF TEACHERS.

According to press reports the Government of Uruguay has decided to increase the salaries of the teachers in the State schools from 10 per cent to 15 per cent, the total increase amounting to about $300,000 a year.

STATE ECONOMIC RAILWAY PLAN.

A group of foreign capitalists has offered to cooperate with the Government of Uruguay to the extent of $15,000,000 in carrying out the State economic railway plan.

PROPOSED RAILWAY FROM MINAS TO ROCHA.

The first steps have been taken for the survey of a branch railway from Minas to Rocha via the Department of Maldonado. Rocha is the only departamento or State capital at present without direct railway communication with Montevideo. The proposed line is to pass through the rich and fertile valleys of Fuentes, Aigua, Alferez, and India Muerta, the lands of which are suitably adapted for colonization purposes.

RAILWAY NOTES.

The Uruguay Great Eastern Railway Co. has been authorized to open to public service its concluded extension from La Sierra to Maldonado, and the Government has approved the plans of the Central Uruguayan Railway Co. for its new station at San Jose. The company will commence the construction of this station at once.

Capital has been subscribed for carrying out the construction of the Trans-Uraguayan Railway from Coronilla to Santa Rosa, with branches in Brazil and Argentina.

The works of the Pan American Railway have been inspected between Durazno and Trinidad. The clearing of the right of way and the grading between these points have been commenced, and 16 kilometers of the grading are already finished. Work has been begun on a car barn at Durazno, and material is now on hand at Trinidad for the erection of a station and warehouse at that place. Between 600 and 700 men are employed on the works.

VENEZUELA

NEW LAWS.

The Official Gazettes of July 4 and August 5 and 9 contain, respectively, the texts of the following laws which have been duly promulgated: Postal law, regulations affecting the council of Government, and law concerning public and vacant lands.

EXEMPTION FROM DUTIES ON RAILWAY MATERIALS.

The President has approved the contract made by the department of public works with the representative of the Bolivar Railway Co. on November 16, 1910, permitting the latter to import, free of duty, materials and tools absolutely necessary for the conservation and operation of the section of this railway between Tucacas and Aroa to the extent of 10,000 bolivares annually.

NEW PLAZA IN CARACAS.

The Government of the Federal District has issued a decree providing for the formation of a new plaza on the site where will be erected the statue of Bolivar, presented by the Syrian colony in Caracas.

CODE OF CRIMINAL PROCEDURE.

The Official Gazette of September 9, 1911, contains the full text of the law of criminal procedure passed by the National Congress on June 27 of the present year and promulgated by the President of the Republic on the 30th of that month.

PARCELS POST.

The number of parcels-post packages received in Venezuela in 1910 was 30,142. The weight of these packages was 110,103 kilos, and the revenue produced therefrom amounted to 605,264.56 bolivares.

NEW CUSTOMHOUSE.

An Executive decree of August 14, 1911, establishes the Imataca customhouse for imports and exports. This customhouse, is on the south bank of the Orinoco River called Caño Corosimo, between the mouth of the Caño Totesant and the terminal point of the railway from the Imataca mine. The jurisdiction of this customhouse will extend from the fork of the Orinoco River beyond the Tortola Island to the point where all the branches which form the delta of the Orinoco empty into the ocean.

TAX ON CIGARETTES.

An Executive order of June 28, 1911, imposes a tax of 1 centime of a bolivar on each cigarette having a length of from 74 to 75 millimeters manufactured in Venezuela. This tax became operative July 11, 1911.

POPULATION OF THE REPUBLIC.

The general bureau of statistics of Venezuela has published the following statements showing the population of the Republic from 1905 to 1911, inclusive.

Years.	Population January 1.	Increase.	Years.	Population January 1.	Increase.
1905	2,598,063	11,045	1909	2,664,241	21,365
1906	2,609,108	17,961	1910	2,685,606	28,097
1907	2,627,069	22,926	1911	2,713,703	....
1908	2,649,995	14,246			

DEMOGRAPHIC STATISTICS.

The bureau of statistics of Venezuela has compiled data showing that during 1910 there were 82,487 births, and 55,436 deaths, or a gain in population during the year of 27,051. The following table shows the population and increases from 1905 to 1910, inclusive:

Years.	Population at beginning of year.	Increase during year.	Years.	Population at beginning of year.	Increase during year.
1905	2,598,063	11,045	1908	2,649,995	14,246
1906	2,609,108	17,961	1909	2,664,241	21,365
1907	2,627,069	22,926	1910	2,685,606	28,097

CONSTRUCTION OF FIRST MERCHANT VESSEL.

The Fluvial Navigation Joint Stock Co. of Venezuela has contracted with the National Dry Dock of that Republic for the construction of a merchant vessel for river and lake traffic, the first of its kind to be built in Venezuela. This vessel will be called *Nuevo Mara*, will be 126 feet long, and equipped to accommodate 32 first-class passengers and 150 tons of freight. The speed of the vessel will be from 6½ to 7 miles an hour. The cost of the vessel will be 180,000 bolivars.

▼ UNION OF AMERICAN REPUBLICS ▼

BULLETIN

OF THE

PAN AMERICAN UNION

DECEMBER 1911

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THE LATE GENERAL RAMÓN CÁCERES, PRESIDENT OF THE DOMINICAN REPUBLIC.

BULLETIN OF THE PAN AMERICAN UNION

VOL. XXXIII. DECEMBER, 1911. NO. 6.

THE tragic death of His Excellency Gen. Ramón Cáceres, President of the Dominican Republic, which occurred on the 18th of November, was a sharp blow to the official world, and caused profound grief at the Pan American Union as well as in all Latin-American circles. Immediately after learning of this sad event, the Director General of the Pan American Union cabled to the secretary of foreign relations at Santo Domingo an expression of the deep sorrow and sincere sympathy of this institution, its executive officers, and staff. As an appropriate honor and tribute to the memory of one who was head of the State, the national flag of the Dominican Republic and the pennant of the Pan American Union were displayed from the building at half mast for three days. In rendering homage to the memory of the late President of the Dominican Republic, the Pan American Union takes this opportunity of recording its earnest hopes that the country may continue along the paths of progress and prosperity which it has hitherto pursued.

NEW LATIN-AMERICAN PRESIDENTS.

The past few months have seen the election of three new Presidents in Latin-American countries, Sr. Don Francisco I. Madero, in Mexico, Sr. Don Luis Mena, in Nicaragua, and Sr. Don Liberato Rojas, in Paraguay. These are all men of high-class statesmanship, who will surely work for the best progress and development of their respective countries, and the director general takes advantage of this opportunity to extend to them his congratulations upon their inauguration and his best wishes for administrations characterized by the prosperity and welfare of their people.

THREE NEW MEMBERS OF THE GOVERNING BOARD.

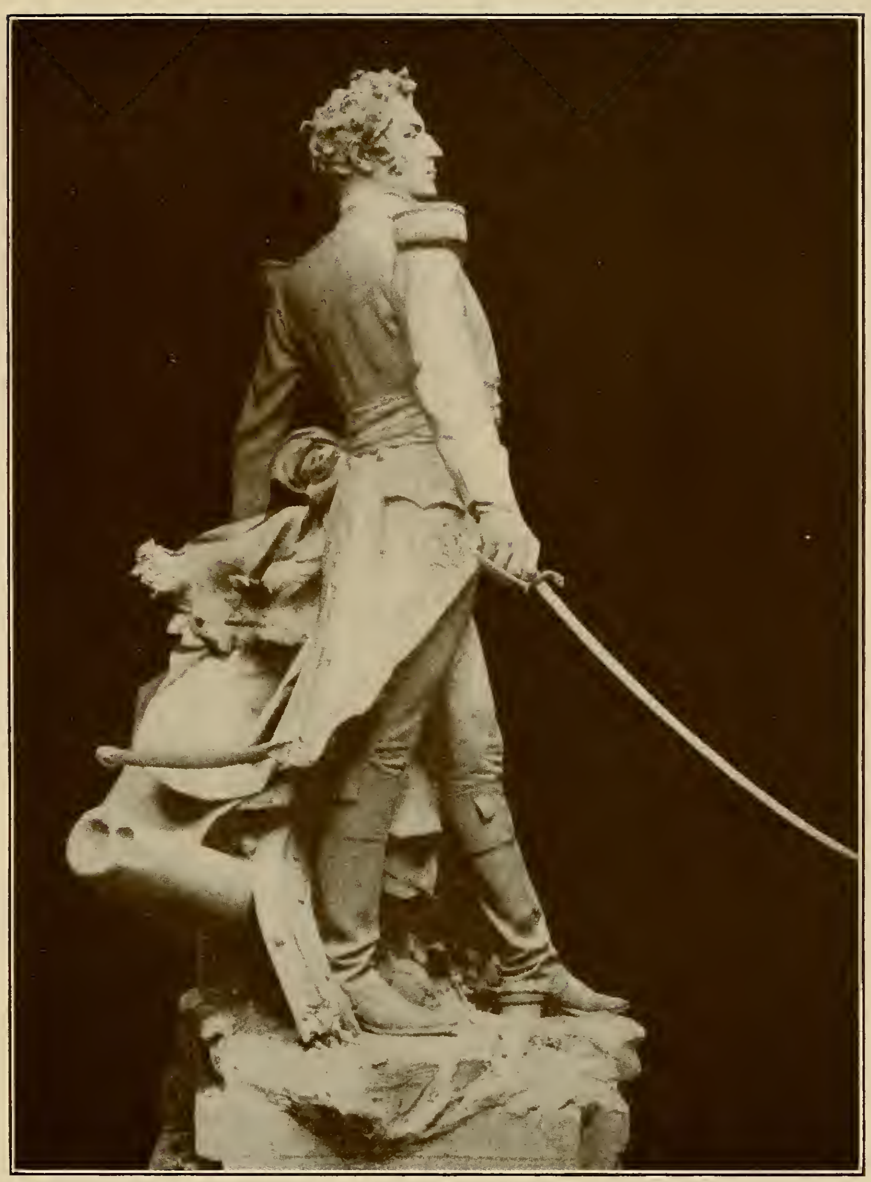
The governing board of the Pan American Union has lost, through separation from their respective diplomatic missions, the active services of Mons. H. Pauléus Sannon, minister of Haiti, Dr. Belisario Porras, minister of Panama, and Dr. Alberto Membreño, minister of Honduras. During their term of service in Washington as members of our governing board, they always took personal interest in the welfare of this institution. The diplomatic missions made vacant by the separation of these gentlemen have been intrusted by their respective Governments to Mons. Solón Menos, for Haiti, Dr. Ricardo Arias, for Panama, and Dr. Fausto Dávila, for Honduras, whom the BULLETIN bids welcome to Washington and to the governing board of the Pan American Union. Each of these gentlemen has been prominent in the public affairs of his country, and from their well-recognized interest in Pan Americanism, the Union expects a continuation of that good will and personal concern in the affairs of the Union which will insure a greater success to this institution.

EIGHTH ANNIVERSARY OF INDEPENDENCE OF PANAMA.

Sr. Juan Brin, chargé d'affaires of Panama in Washington, in celebration of the eighth anniversary of the independence of the Republic of Panama, gave a large banquet on November 3, 1911, in the Hall of the Americas of the Pan American Union Building. There were 50 guests, including members of the Cabinet, the diplomatic and consular corps, and other men prominent in the affairs of Latin America. Sr. Brin made an appropriate address of welcome to his guests and toasted the President of the United States and rulers of the other nations whose representatives attended the banquet. The Secretary of War, Hon. Henry L. Stimson, responded for the United States, and the Brazilian ambassador, H. E. Domicio da Gama, replied on behalf of the Latin American countries. On the anniversary of Panama, the flag of that Republic was raised over our building, a custom which the Pan American Union has observed since coming into its new home.

IRVING BEDELL DUDLEY.

The announcement of the passing away of Hon. Irving Bedell Dudley, the United States ambassador to Brazil, on November 27, 1911, at Baltimore, Maryland, came as a distinct shock to his many friends and his official associates. Mr. Dudley returned to the United States from Brazil for several months' leave, and was under medical treatment while here. His condition, however, was not regarded sufficiently serious to cause alarm, and his death was therefore sudden and unexpected. The demise of the ambassador removes from the diplomatic service of the United States one of its able representatives and is a severe loss to Latin-American circles, where his influence was strongly felt for many years. Mr. Dudley was born in Jefferson, Ohio, November 30, 1860, and was graduated from Kenyon College in 1882. He received the degree of master of laws from the Columbian University Law School in 1886, and practiced the profession at San Diego, California. Here he acquired con-



STATUE OF GENERAL SUCRE AT BOGOTA, COLOMBIA.

This bronze statue of Grand Marshal Antonio Jose de Sucre, the work of the famous French sculptor Verlet, was unveiled at the Plaza de Ayacucho, in Bogota, Colombia.

Bogota, the capital of the Republic of Colombia, has just seen unveiled a statue to one of the great heroes of the war of independence in South America, a hero ranking with Bolivar and San Martin in the affections of the people. Antonio Jose de Sucre was born in Cumana, Venezuela, in 1793. As a very young man he fought for the liberty of his country, and allied himself with Bolivar. His crowning achievement was the victory of the battle of Ayacucho, in Peru, August 6, 1824, by which the power of Spain was driven from the continent, and in honor of which he was made *Gran Mariscal de Ayacucho*. Bolivia (Alto Peru) chose him for the first President of that newly created Republic. Sucre combined with his passionate love of freedom an equally passionate love of justice, and in addition to his great military victories, he accomplished much in instilling the best principles of self-government into the people of his time. This statue in bronze, placed in the Plaza de Ayacucho on which the Military School faces, is the work of the artist Verlet, and gives a fine example of the spirit of Sucre.

siderable prominence and won a position on the bench. The diplomatic career of Mr. Dudley commenced in 1897 with his appointment as envoy extraordinary and minister plenipotentiary to Peru. From this post he was elevated in 1906 to the position of ambassador extraordinary and plenipotentiary to Brazil. Thus his diplomatic connections have been confined mainly to Latin-American countries. In both these missions Mr. Dudley so skillfully and efficiently conducted the affairs of his Government that he became highly respected and esteemed in the diplomatic and official circles of the respective capitals. His interest in and admiration for the people of the countries to which he was accredited, and his appreciation of their admirable qualities, moreover, won for him the personal regard of all those with whom he came in contact and made him a conspicuous figure in their social life.

A HIGH COMPLIMENT FOR THE PAN AMERICAN UNION.

The Quarterly Review for October, 1911, contains an interesting and instructive article entitled, "British Diplomacy and Trade," written by Percy F. Martin, the well-known publicist and traveler. In the course of this paper he gives a good deal of attention to British trade relations with Latin America and makes a reference to this institution which, in view of Mr. Martin's high standing authority as an expert on trade, economics, diplomacy, and international relations, is quoted below:

> * * * Not only is there in force a complete system of intelligence relating to trade matters in the United States, by means of which information is published in the form of daily reports and circulated broadcast, but the Government actively encourages and financially assists an institution known as the International Bureau of American Republics, the thorough methods of which, under the able direction of the Hon. John Barrett, have resulted in more than doubling United States trade with the Latin American Republics within the last 10 years.
>
> Great Britian has no such useful institution as this. All the chambers of commerce of the United Kingdom combined, with the publications which are issued under the title of "Consular Reports," fail to render anything like the assistance to British trade which the International Bureau of American Republics confers upon United States commerce. While founded essentially for the benefit of American trade with the Latin American States, and designed to render every assistance in cultivating and carrying on such trade by means of literature, maps, reports, etc., the bureau has adopted the broad-minded and liberal policy of supplying some of its valuable publications and tendering its profitable advice to correspondents of other nationalities. A nominal price, scarcely sufficient to cover the cost of production, is placed upon the publications of the bureau. It is no exaggeration to say that the best mirror of British trade as carried on abroad is often that which is provided by the bureau whose correspondents report fully upon British methods and British enterprises for the benefit of its subscribers. Thus it is to the pages of its admirably edited and handsomely printed monthly BULLETIN that we must refer in order to discover what is being done commercially and financially in Latin America. Information is afforded therein which, if found at all in our consular reports, is only available many months afterwards, and the United States Government is practically doing for British merchants, contractors, and capitalists, without charge or reward, what their own Government is paid for but wholly fails to provide.

NEW PUBLICATIONS RELATING TO LATIN AMERICA.

One of the practical evidences of the remarkable increase of interest in Latin American countries and in their commerce and progress is the number of publications and trade magazines which are being started for the purpose of meeting the demand for more information about that part of the world. The Pan American Union looks with satisfaction upon this new movement, although it must speak frankly and state that there have been so many attempts followed by failures in this direction that it is obliged to advise both publishers and subscribers to proceed with caution, make sure of their ability to satisfy the needs of trade and business, and stand the competition which must be encountered. One of the unfortunate features of this particular kind of endeavor in the past has been the fact that many of these magazines are simply the organs of private enterprises that use them to boom their efforts to forward certain concessions or privileges in these countries, although they give the appearance of being magazines or papers started purely for the development of general trade and commerce. The Pan American Union and the BULLETIN will always be ready to encourage perfectly legitimate effort along these lines, but it is obliged to go on record, in view of the great number of inquiries which come into it, that it has no official relationship or connection whatever with any publication carrying the name of Pan American except the BULLETIN OF THE PAN AMERICAN UNION. So many inquiries have come into this office asking whether the Pan American Union had anything to do with various organizations and publications carrying the name of Pan American that it is necessary to state here that inasmuch as this institution is an official international organization maintained by all the American nations, it can not, under any conditions, have any direct connection or association with private enterprises.

FIFTH INTERNATIONAL SANITARY CONFERENCE.

In accordance with the invitations issued by the Chilean Government, the Fifth International Sanitary Conference met at Santiago from November 5 to November 12. President Barros Luco and members of his cabinet, diplomats, senators, deputies, and other persons prominent socially attended the opening meeting. The minister of foreign relations, Sr. Enrique A. Rodriguez, delivered an address of welcome, the chairman of each delegation responding for his country. Dr. Gregorio M. Guiteras spoke on behalf of the United States. Capt. Granville Fortescue, who is traveling in South America, was detailed to represent the Pan American Union. These sanitary conferences are of primary importance, as they serve as means for bringing together the best medical talent of the countries of America for the discussion of matters pertaining to hygiene and the sanitation of cities, ports, means of transportation, etc., for the benefit of commerce and navigation.

IRVING BEDELL DUDLEY,
The late Ambassador of the United States to Brazil.

REPRINTS FROM THE ANNUAL REVIEW.

The reprints in individual pamphlets of the descriptive data of the different Latin American Republics which appeared in the annual review numbers of the MONTHLY BULLETIN, July and August issues, are proving most popular and are now in great demand from all portions of the world. They are printed on high-class paper, contain valuable diagrams, selected photographs in addition to most complete data in succinct form covering the trade, commerce, and other practical features of the national and economic growth and development of these countries. They contain about 20 pages and answer the majority of questions that the average man wishes to know concerning the industrial, economic, and commercial conditions of Latin America.

THE PANAMA-PACIFIC INTERNATIONAL EXPOSITION.

All reports which are being received from San Francisco indicate that the people of that progressive city are carrying forward with characteristic zeal and energy their plans for making the Panama-Pacific International Exposition the greatest the world has ever known. The exercises of digging the first spadeful of earth were made historical and notable by the presence of President Taft. The reception which was accorded him by the city of San Francisco and the addresses that were made on this occasion all give evidence of the general feeling that this exposition will celebrate an event, the opening of the Panama Canal, which is of vast importance to the commerce and prestige of the United States and particularly of the Pacific coast. No effort should therefore be spared by the Government of the United States, the State of California, and the people of San Francisco to carry through to a brilliant completion an exposition in which all the nations of the world will participate on a larger scale than they have ever done before. It is to be hoped that each one of the American Republics, from Mexico and Cuba, south to Argentina and Chile, will make appropriations for buildings and exhibits that will be a credit to them and in harmony with the progress they are now making. In the November issue of the BULLETIN there was pubished an interesting description of the exercises connected with these ground-breaking ceremonies and the presence of the President of the United States.

BURTON HOLMES'S LECTURES ON SOUTH AMERICA.

In the latter part of November and on different dates in December Burton Holmes, the celebrated traveler, delivered his lectures descriptive of his recent visit to Latin America. It would be a great educational influence in favor of closer relations between the American Republics and for the awakening of wider interest throughout the United States

Photograph by Harris-Ewing.

SEÑOR DR. FAUSTO DÁVILA,

The new Envoy Extraordinary and Minister Plenipotentiary of Honduras to the United States.

in her sister Republics if these lectures could be delivered all over the country and heard by multitudes. The wonderful photographs shown by Mr. Holmes, supplemented by his most interesting method of description, make these lectures as attractive as the best theatrical productions. In these days when men and women are so busy with official business and social duties that they can not read books, magazines, and other publications descriptive of our Latin American countries, and when if they travel they go largely to Europe or to the Orient, there can be no better way of their making themselves acquainted with the countries, peoples, and cities of our southern neighbors than by attending these lectures of Burton Holmes.

ANGLO-LATIN AMERICAN EXPOSITION IN LONDON.

An illustration of the growing effort in the British Empire to give attention to Latin American countries can be seen in the preparations that are now being made for the South American and Anglo-Latin Exhibition which is to be held next year in London. The director general has recently received a communication from Imre Kiralfy, Esq., commissioner general of the Coronation Exhibition, 1911, outlining his plans and sending a number of booklets in Spanish, Portuguese, and Italian descriptive of the proposed exhibition. He also incloses a letter to the director general from Dr. Eugenio Dahne, commissioner of the Brazilian Government representing the department of agriculture, commerce, and industry, in which Dr. Dahne says, in part:

> For next year Mr. Imre Kiralfy is now organizing a Latin American Exposition to make the resources and conditions of the South and Central American Republics better known to the public, and as he had applied to the Brazilian Government to support and participate in the same I have received instructions from my chief, the minister of agriculture, industry, and commerce at Rio de Janeiro, to study the conditions here and to suggest to what extent Brazil should be represented.
>
> From what I have seen I am satisfied that an exposition of the Latin American Republics in London as planned for next year by Mr. Kiralfy will be of very great benefit in making those countries better known in Europe. As the existing buildings (Coronation buildings) are very well adapted and can be made use of and the disposition of the grounds and buildings in general is an excellent one, and as the exhibits of our South American countries now at the exposition at Turin can be made use of, the greatest facilities exist for the participation of these countries.
>
> I am sure that you, as the herald and champion of the Latin American Republics, will be very much interested to hear of this, and have therefore suggested to Mr. Kiralfy to send you full particulars of his projects and program of the Latin American Exposition of 1912, with a view to your calling attention to it in your BULLETIN, and I am sure you will give Mr. Kiralfy all the support and assistance you can.

The director general is always ready to give due publicity in the BULLETIN to any legitimate effort to make the possibilities and opportunities of the southern Republics better known in the greater northern world, and he hopes that this exposition will be thoroughly successful in every respect. If the Latin American countries will arrange to transfer their exhibits after 1912 to the great exposition to be held in San Francisco to celebrate the opening of the Panama Canal, then two great distinct and important sections of the Northern Hemisphere will have an opportunity to get a close view of the wealth and products of these remarkable countries.

CHAUTAUQUAN ATTENTION TO SOUTH AMERICA.

The Chautauquan Magazine has responded to the growing interest in Latin America which has been awakened by the Pan American Union in commencing to publish a series of interesting articles under the title, "A reading journey through South America," prepared by Mr. Harry Weston Van Dyke, of Washington. In view of the character of these articles and the wide constituency of the Chautauquan Magazine, the Pan American Union had much pleasure in providing Mr. Van Dyke with every facility it could in obtaining the information necessary to write these articles. It is probable that they will be republished in pamphlet or book form and so reach a still larger circle than that provided by the magazine. While the Pan American Union can not of course be responsible for the facts or for any opinions advanced in this series of articles, it can say that they are certainly deserving of close reading by all persons who are not familiar with South America and who wish to inform themselves upon a subject of growing importance. Mr. Van Dyke has worked very hard to do justice to this extensive topic.

THE PAN PACIFIC CONGRESS.

Mr. H. P. Wood, of Honolulu, Hawaii, has recently sent out a circular inviting participation in the second session of the Pan Pacific Congress to be held in the rooms of the Chamber of Commerce, Honolulu, Hawaii, February 19–24, 1912. The program outlined is so elaborate and interesting that the sessions can not fail to be of great interest and should be of practical value in the campaign of preparation for the Panama Canal. That the Pan American Union has been an inspiration and a suggestion for the Pan Pacific Congress is shown by the terms of the circular, which says that:

> The name Pan Pacific Congress was adopted with the idea that the organization should stand in the same relation to all the countries bordering on and tributary to the Pacific as the Pan American Union, for instance, does to the Republics of North and South America.

In explaining the reason for holding this congress, the circular further says:

> The present material progress of the Pacific, the great opportunities of the future, and the necessity of getting ready for the Panama Canal all emphasize the holding

HON. JOHN W. GARRETT,

Who has been transferred to the post of Envoy Extraordinary and Minister Plenipotentiary of the United States to the Argentine Republic from the post at Venezuela.

of a conference of this character, which it is intended shall be practical, useful, and comprehensive.

It is urged that Governments, States, and Territories, commercial and other interested organizations send men of keen intelligence and training who can return home and become centers and authorities for the proper use and dissemination of the broad knowledge they should acquire at this gathering.

STUDY OF SOUTH AMERICA IN PUBLIC SCHOOLS.

It is a source of much gratification to the Pan American Union to note that its efforts in awakening interest in the countries, peoples, and affairs of our neighbors in the Southern Hemisphere are bearing fruit not only in commercial circles but in clubs and societies organized for intellectual work and in educational institutions. Study in Latin American countries is now being made a regular feature in the programs of clubs throughout the United States, while the schools are giving closer and more careful consideration to the study of these remarkable countries. From time to time this institution is in receipt of communications indicating that the BULLETIN has played no small part in the development of this keener interest, particularly in the schools. There is pleasure in quoting from a recent note received by the director general from Mrs. Elizabeth B. Pendlebury, an instructor in the Adjunct School of Practice at Philadelphia, showing the influence which has tended to stimulate the interest in teaching the facts about these countries to the younger children in attendance at the public schools:

> * * * You can not realize just what captivating interest lies hidden in the apparently cold black print of the BULLETIN. But every line, every word, is replete with living interest. * * * Through the BULLETINS I have obtained so much valuable information that I feel as though I wanted to teach and talk South America all day long. Everything is made so very clear and plain and without bias. I am now a training teacher in the Philadelphia school of practice, and every practice teacher who has been with me when teaching South America has been inspired with the great importance of these countries, and this inspiration is the result of the subject matter of the BULLETINS. The illustrations are simply wonderful teachers and can not be obtained in any way except from the BULLETIN. I keep all the pictures of the same subject or related subjects together, and as the subject is about to be presented these pictures are placed on the walls for the children to view, and they never lose interest in them * * *.

It is also pleasing to note that in The Teacher, a monthly school journal and education review, under the general heading of Grade Helps, considerable attention is given to the newer phases of Latin America, with editorial comments on the importance and vast field of interesting data available to assist in teaching this section of the world's geography in the public schools.

Photograph by Harris-Ewing.

SEÑOR DR. ALBERTO MEMBREÑO,

Retiring Minister of Honduras to the United States. As a member of the Governing Board of the Pan American Union, Dr. Membreño always displayed an interest in the progress of this institution, which has won for him the respect of all those with whom he came in contact. The Bulletin takes this opportunity to express its regret at the Minister's departure from Washington and to offer its best wishes for his continued success.

CONFERENCE OF AMERICAN SOCIETY FOR JUDICIAL SETTLEMENT OF INTERNATIONAL DISPUTES.

On November 7 and 8, 1911, there were held the meetings of the national conference of the American Society for Judicial Settlement of International Disputes, at Cincinnati, Ohio. The opening session, which was presided over by Hon. John Hays Hammond, the president of the organization, was made most notable by the presence of President Taft, who delivered an address. Papers on international relations, development, and arbitration were read at each of the four sessions of the conference, and interesting discussions followed. The presiding officer of the second session was Hon. James Brown Scott, the eminent authority on international law, and Hon. Theodore Marburg officiated at the third session. The speakers and delegates to the conference included well-known educators of the country and distinguished leaders in international affairs. The conference was brought to a successful termination with a banquet, on the evening of the 8th of November, at the Business Men's Club. The speakers of the evening were Hon. Samuel J. Elder, United States counsel, North Atlantic Fisheries Arbitration, who spoke on "Judicial determination in recent international awards"; Hon. Charles W. Dabney, president of the University of Cincinnati, discussed "Our international duty as Americans"; and Hon. John Temple Graves, of the New York American, who chose for his subject "The proposed arbitration treaties with England and France." The results of these sessions can not but have a most beneficial effect in spreading the influence of peace and arbitration throughout the world.

NATIONAL RIVERS AND HARBORS CONGRESS.

The Eighth Annual Convention of the National Rivers and Harbors Congress held its sessions at the New Willard Hotel, Washington, D. C., on Wednesday, Thursday, and Friday, December 6, 7, and 8, 1911. This convention was one of the most effective that had yet been held, and a number of prominent speakers addressed the meetings. There can be no doubt as to the importance of the question of river and harbor improvements throughout the United States, particularly in view of the approaching completion of the Panama Canal and the increased shipping which must result therefrom.

THE TOLLS OF THE PANAMA CANAL ∴ ∴

IT was the intention of the director general to publish in this issue of the MONTHLY BULLETIN a statement in regard to the question of tolls for the Panama Canal, a brief summary of which was given to the newspapers early in December, but the impossibility of getting together all the statistics and data needed before the BULLETIN must go to press makes necessary the postponement of its publication. It had not been the purpose of the director general to make public his views until he laid them before the committees of the United States Congress having in charge the question of tolls, but in response to the advice of many Members of Congress and others concerned, who wish to see a general discussion of this subject before legislation is enacted, he prepared the summarized statement mentioned above before completing his investigations.

His observations and conclusions are, of course, unofficial and purely personal and represent in no way any policy or position of the Pan American Union as an organization. They are, however, based on his studies of Pacific and Pan American commerce while United States minister in Asia and South America, and also as executive officer of the Pan American Union, extending over a period of nearly 18 years. Aside from the probability of appearing before the congressional committees, he was prompted to put into printed form the result of these studies by the large number of letters asking for his opinion about canal tolls which he has received and is receiving from Members of Congress, newspaper editors, and special writers, representative men engaged in foreign commerce, and heads of shipbuilding, owning, and operating companies.

While the director general believes in a canal essentially free to the ships and commerce of all nations; that is, a limitation of charges to the actual cost of towing and handling vessels not including cost of maintaining the canal and paying interest on the huge investment, he realizes that public sentiment is not yet ripe for such terms and that tolls for foreign vessels, and American vessels engaged in foreign trade, will probably be based on the annual cost of operation, maintenance, and interest on the investment. There is a strong probability, however, that public sentiment will demand that vessels engaged exclusively in the coastwise traffic between the Atlantic, Gulf, and Pacific ports of the United States shall not pay such tolls but actually enjoy the benefits of a free canal.

For a better understanding of the problem before Congress a few general facts may be mentioned here. Experts on sea transportation estimate that the vessels using the canal, provided the tolls are reasonable, will represent an annual aggregate in excess of 10,000,000 net tons, possibly 12,000,000. The estimated annual cost of operation and maintenance is approximately $3,000,000. The total investment when the canal is completed will amount nearly to $400,000,000; interest on this sum at a low Government bond rate of 2½ per cent would equal $10,000,000. If, then, tolls are based on these fixed charges of interest, operation, and maintenance, they should bring in an annual revenue of $13,000,000. On a basis of 10,000,000 net tons, not including American coastwise vessels, the tolls would be $1.30 per net ton. Suppose that the average vessel is classed as low as 3,000 net tons, it must pay for each passage $3,900, or $7,800 for going and coming. This latter sum, representing one round trip, would pay the salaries and wages of a captain, three officers, and several members of the crew for a whole year; quadrupled to represent four trips, it would equal the interest at 6 per cent on a vessel costing $500,000 to build. These facts are given simply to demonstrate how carefully and thoroughly the question of tolls must be considered if we would have the canal a success from the day it is opened to the traffic of the world.

THE PAN AMERICAN MASS.

THE Pan American Mass has now become one of the regular holiday functions of Washington in the celebration of the Thanksgiving Day festival in the United States. For the third time Thanksgiving, which in 1911 fell upon the last day of November, was made the occasion of that solemn service in St. Patrick's Church in Washington, and particular attention was paid to the spirit which pervades that holiday in all America.

The President of the United States, the diplomatic representatives of the 20 other American Republics, members of the Cabinet, and very many especially invited guests, completely filled the well-known church of St. Patrick's, and all were impressed with the dignity and beauty of the ceremony. It was a fitting manner of recognizing one of the most important holidays observed in the country.

Commendable effort was made to blend the religious and the patriotic, and the result was a glow of color within the building, a wealth of music, and of the accepted decorations so characteristic of the traditions of the church at its best, and of reverence for the solemn performance at the altar. At the same time the added orchestral music, the presence of guests who indicated by their attendance the significance of the event, and especially the sermon preached to the ears of the respectful listeners, all showed that the unusual was taking place.

Invitations had been sent to the guests several days in advance, and suitable arrangements were made for all those who accepted. President and Mrs. Taft were given the place of honor, their seats being at the head of the center isle of the church, immediately under the chancel rail. The forward pews off this center isle were reserved for the diplomatic corps of the Latin American embassies and legations, and each Republic was assigned a pew decorated with the colors of its country. The pillars of the church were wrapped with the emblems of the United States entwined with those of other Republics.

The altar was aglow with lighted candles, while various symbolic clusters of electric lights above it made that whole body of the church almost as brilliant as the radiant sunlight out of doors. Before the actual celebration began, the orchestra played secular music while the people took their places, strains of well-known Spanish melodies being repeated more than once, seemingly in response to the unspoken but undoubtedly ardent wish of those who listened to it. Then promptly at 11 o'clock the President entered, quietly took his seat, and the services began.

The Rev. Dr. William T. Russell, rector of St. Patrick's, was the official host, but in attendance at the altar was his eminence Cardinal Gibbons, now one of four dignitaries, princes of the church, for the creation in Rome of the other three recently selected American cardinals, preceded the Pan American Mass in Washington by only a few hours. The Rev. Francis P. Doory, of Baltimore, celebrated the high mass, and the Right Rev. Bishop Donahue, of Wheeling, W. Va., delivered the sermon.

(Photo by Harris-Ewing.)

INTERIOR OF ST. PATRICK'S CHURCH, WASHINGTON, D. C., WHERE THE PAN AMERICAN MASS WAS OBSERVED.

The formal celebration was concluded promptly at 1 o'clock, the worshippers passing slowly out of the church, following the President and other guests, while the orchestra played the arrangement of national airs of the American Republics. A luncheon had been prepared in the rectory of St. Patrick's, next door, and here the guests met immediately after the ceremony, Mgr. Russell being again the host at the more informal function. President Taft could not attend, as he had already made another engagement elsewhere, but he was represented by the Secretary of the Treasury, Hon. Franklin MacVeagh. Cardinal Gibbons was, with the representative of the President, a guest of honor. Mgr. Russell delivered a short address of welcome, touching upon the prosperous conditions in the United States as a cause for thanksgiving, and upon the inspiration and evident success of the movement, of which this holiday mass was but one factor, to bring all the Republics of the Western Hemisphere into close accord. He then presented Cardinal Gibbons, who called attention to the spirit of peace which was so hopeful in the whole of America. He praised President Taft and called him the "embodiment of peace," and also praised the Director General of the Pan American Union for the energetic and commendable administration of his office. The cardinal then proposed the toast to the President of the United States, which was drunk standing, and the response, in the absence ofthe President himself, was made by Secretary MacVeagh. He, too, pleaded for a closer relationship between all the Republics of America, as the most natural and direct result of the early historic struggles. The Brazilian ambassador then spoke to express the kindly sympathy

(Photo by Harris-Ewing.)

THE PRESIDENT AND MRS. TAFT, ESCORTED BY MGR. RUSSELL, LEAVING THE CHURCH AFTER THE PAN AMERICAN THANKSGIVING DAY SERVICE, NOVEMBER 30, 1911.

which all Latin America demonstrated in their hearty support of every movement actuated by the spirit of peace and friendship. The Director General of the Pan American Union said that the thanks of all people were due the past and present Secretaries of State of the United States for their work in furthering peace in the western world.

The sermon preached by the Right Rev. Patrick J. Donahue was notable from many points of view. He began by detailing the many things for which the United States should be thankful on that beautiful holiday—for the bountifulness of the soil, the harvest just gathered, and the abundant promises for increase in the future. He spoke of the efforts of the various agricultural schools and departments to intensify the productivity of the soil, and urged the people to give loyal support to such measures, because the time was soon coming when food production would fall short of the increasing demand in this country, unless more farm work was done, and a desire grew up to turn the current away from the big cities and back again to the out of doors of the country.

Bishop Donahue spoke feelingly also of the treaties of peace now pending between the United States and Great Britain and between the United States and France, and expressed the vigorous hope that the Senate would approve them. "I am not able to state the influences at work to withhold the ratification of these treaties," said the bishop. "I impugn no man's motive, but I express the belief that the great majority of the people of the United States want these treaties ratified at the coming session of Congress, thus adding their moral weight to the world-wide peace movement."

Referring to Latin America, the bishop paid them high praise for their efforts in behalf of and attitude toward international peace. The court at The Hague was mentioned, and the Pan American Union, both great forces for the spread of the spirit of peace, both also having buildings of material worth to house them, due to the generosity of the minister of peace, Mr. Carnegie.

Along with blessings and causes for which the nation must be thankful, the bishop called attention to the responsibilities of a people and to many great and serious problems not yet settled. "Let us not forget," he said, "the unending struggle between capital and labor; the law's delay; the attempt of some to destroy the home and to uproot the social order of the day. Prudence, moderation, and statesmanship are necessary to deal with these issues." Taking the compass for illustration, he referred to the fact that the needle ordinarily points to the north, but that variations occur. He added, "The American people may lose their heads for a time; they may be swayed by so-called leaders—false magnets—but in the end the needle will again point to the north of noble thinking and living." Surely all who were privileged to listen to this calm review of the year's blessings and the dispassionate presentation of a people's duties, left the church with a feeling of gratitude that they had been present.

The officers of the mass were: His eminence James Cardinal Gibbons; Very Rev. George Dougherty, D. D., assistant priest to the cardinal; Very Rev. Edward A. Pace, D. D., and Very Rev. James A. Burns, C. S. C., chaplains to the cardinal; celebrant of the mass, Rev. Francis A. Doory; deacon of the mass, Rev. Charles M. Bart; subdeacon of the mass, Rev. Carroll Milholland; Right Rev. Patrick James Donahue, D. D., preacher; masters of ceremonies, Revs. James A. Smyth, William J. Carroll, and John M. McNamara; assistant master of ceremonies, Charles Fisher and Right Rev. William T. Russell, D. D., rector of St. Patrick's Church.

The sanctuary choir was in charge of Prof. R. Mills Libby, and Prof. Anton Gloetzner conducted the mixed choir, with Miss Jennie Glennan at the organ. A feature of the musical program was the recessional, "The Pan American March," played by the organ and orchestra, and including parts of the national airs of all the American countries.

The invited guests, representing Pan America, included Sr. Dom Domicio da Gama, ambassador from Brazil, and members of embassy; Sr. Don Gilberto Crespo y Martinez, ambassador from Mexico, and members of

(Photo by Harris-Ewing.)

HIS EMINENCE JAMES CARDINAL GIBBONS AT THE PAN AMERICAN THANKSGIVING DAY.

At the luncheon following the divine service the Cardinal spoke in feeling terms of the great work of President Taft for the cause of peace, and praised the Director General of the Pan American Union for his successful administration of that institution.

embassy; Sr. Don Joaquin Bernardo Calvo, minister from Costa Rica, and members of legation; Sr. Don Ignacio Calderon, minister from Bolivia, and members of legation; Sr. Don Frederico Mejia, minister from Salvador, and members of legation; Sr. Dr. P. Ezequiel Rojas, minister from Venezuela, and members of legation; Sr. Don Emilio C. Joubert, minister from the Dominican Republic, and members of legation; Sr. Dr. Salvador Castrillo, minister from Nicaragua, and members of legation; Sr. Lcdo. Antonio Martin Rivero, minister from Cuba, and members of legation; Sr. Dr. Romulo S. Naon, minister from Argentine Republic, and members of legation; Sr. Gen. Pedro Nel Ospina, minister from Colombia, and members of legation; Sr. Dr. Carlos Maria de Pena, minister from Uruguay, and members of legation; Sr. Don Eduardo Suarez Mujica, minister from Chile, and members of legation; Sr. Dr. Fausto Davila, minister from Honduras, and members of legation; Mr. Solon Menos, minister from Haiti, and members of legation; Sr. Don Joaquin Mendez, minister on special mission from Guatemala, and members of legation; Sr. Don M. de Freyre y Santander, chargé d'affaires of Peru, and members of legation; members of the legation of Ecuador; Sr. Don Juan Brin, chargé d'affaires of Panama, and members of legation; Clifford Walton, consul general of Paraguay, and Mrs. Walton.

PANAMA'S BIRTHDAY ANNIVERSARY, 1911

ON November 3, 1911, the Republic of Panama celebrated the eighth anniversary of the declaration of independence. That country is the youngest Republic in the Americas, forming the twenty-first in the Union of American Republics stretching from the northern border of the United States to the far southern extremity of Cape Horn. While the last in point of establishment, it is by no means least in point of accomplishment. The Panama Canal has rather unnecessarily overshadowed the activities of the Republic itself, and this birthday celebration offered a good opportunity to recall the hopes and plans of the country.

Thus the President, Sr. Don Pablo Arosemena, in his public address announcing the holiday, said:

> We have secured the priceless gift of peace, a pledge of progress. We have advanced in a moral and material way. The schools are offering to all unstinted education. Besides the material tasks already concluded, we are determined to realize greater ones in the future. We have erred, but these errors are by no means irreparable, for every picture has its shadow. Yet common sense will dissipate them, petty passions will disappear, private interests will yield to the general good, and thus we recognize to be the sacred duty to conserve unharmed our independence and to honor our liberty so carefully acquired.
>
> Isthmians, let us be loyal to the constitution and masters of our hearts. Let our constant effort be the perpetuation of the Republic. Let us practice good will, so that throughout our country the highest order of civilization may characterize the nation. Let us show ourselves capable of administering judiciously our public duties, let us have the moral courage to speak the truth and to defend the right. Let us not look with indifference upon the exercise of our political functions, making it at the same time our boast that we yield ourselves with respect to popular will, when clearly indicated. In obeying the law, in fostering justice, and in looking after the welfare of our citizens, we best prove that we belong in the society of the cultured nations of the world.

Actuated by these sentiments the holiday festivities in Panama were well worth recording. Probably the most notable feature of the program was the participation of the schools in the street parade which took place in the afternoon of November 3. About 2,000 children marched through the city, accompanied or rather led by their teachers, assembling at Santa Ana Park, and after passing the entire length of the Avenida Central, they stopped in front of the presidential palace and then continued to the Central Park, where they were entertained by the municipality. At the end each child was given a little uniform of a sailor, white and blue, in which they

SEÑOR DON PABLO AROSEMENA,

President of Panama.

adorned themselves, and afterwards received packages of sweets and other things dear to the hearts of all children, no matter of what country or blood. Panama, it is easy to see, is determined to pay especial attention to the education of its youthful children, so that when they grow up they may have a firm basis for the patriotism so carefully cultivated.

(Photo by Harris-Ewing.)

SEÑOR DON JUAN BRIN,

Chargé d'Affaires of Panama at Washington, who, on November 3, 1911, was host at a banquet in the Hall of the Americas of the Pan American Union, in celebration of the eighth anniversary of the independence of his country.

Then the fire-fighting corps of the city had an interesting drill in the Herrera Plaza, which was of course witnessed with delight by the assembled crowds. The police, not to be outdone by their fellow associates in the civic organization of Panama, went through their official review before the people, and this opportunity was seized to present medals of honor to two of their members for distinguished acts during service. Another pleasant episode of the holiday was the attention paid to the inmates of the hospital and the invalids' home, so that they might not feel that their incapacity for active participation left them out altogether of the general festivities. Formal visits were made to these institutions, delicacies of many kinds were distributed, the visitors, both ladies and gentlemen of social prominence in Panama, exerted themselves to make the sufferers forget for the moment at least their ailments, the band gave them a cheering concert with national and other airs, so that a bond of sympathy was strengthened between the sick and the well, all feeling the spirit of nationalism however young.

The formal program of the celebration was most impressive in the reception given by the President of the Republic to the diplomatic and consular officers, on the afternoon of the 3d of November, and to officials and employees of the Government. During the evening other receptions were announced, while the people were provided abundant amusement in the way of illuminations of public buildings and electric displays in the parks. A general feeling of gaiety characterized all such diversions, showing that the national birthday is appreciated on all sides.

The banquet offered to distinguished guests by the chargé d'affaires in Washington has already received notice in the Bulletin elsewhere, so that a mere mention of it here, as indicating the broad spirit of the Republic, will suffice.

CELEBRATION IN SAN SALVADOR OF FIRST EFFORT FOR INDEPENDENCE IN CENTRAL AMERICA

HISTORY records in glowing terms the beginnings of the struggle for liberty in America. It has emphasized the glorious campaign of Hidalgo in Mexico, and his pathetically famous 15th of September "grito" which has been a revered watchword in that Republic for 101 years. It has emphasized also the Argentine uprising of the 25th of May, 1810; of the 20th of July, 1810, in Colombia; of the 18th of September, 1810, in Chile. Ecuador and Bolivia proudly look back upon the year 1809 as the beginnings of their struggles. Venezuela and Paraguay have just entered upon their second century, after celebrating the centennial anniversary of their early effort for freedom, in 1811. But history has used only a quiet pen in recording another worthy event which likewise reflected the spirit of Latin America.

Yet the 5th of November, 1811, is a date dear to the hearts of many patriots. It is a day sacred to Central American patriotism, for it heard the first real cry for freedom, for political independence, which found voice in those Spanish possessions lying between Tehuantepec and Panama.

"To Salvador certainly belongs the honor of the first attempt for independence," and to the present Republic of Salvador have the other Republics of Central America right loyally yielded the honor of celebrating the 100th anniversary of that attempt. This 5th of November was therefore commemorated in that country with a spirit and an enthusiasm well worth recording, as it showed the patriotism of the people to their country; but it had also a broader foundation, because it bore a prophecy that some time in the future the original ambition of Central America is to be fulfilled. That ambition did not in the beginning of independent movement proclaim a localization of patriotism or a loosely related subdivision on the lines of the old captain-generalcy or so-called kingdom of Guatemala, but it sincerely planned the Central American Federation. This was to be in deed as well as in word a Central American Republic, and the essence of that idea is to be found again in the celebration of the 5th of November, 1911, just completed in the city of San Salvador, the capital of the present Republic.

The simple facts in the matter are these. While germs of independence were fostered in secret by a few intelligent persons, who had hopes for a government more consonant with the spirit of the age, the movement was taken up and spread by a few enthusiasts who were blind to the foolhardiness of their attempt. Restraint and ill treatment, as practiced under the stringent policy of the representatives of the Crown of Spain, had already produced effects; and when those of the people capable of thinking at all remembered the successful revolution in the United States, the crash in France, and

DR. MANUEL E. ARAUJO, PRESIDENT OF SALVADOR.

Who announced November 5 as the central day of celebration by ringing the bell in the Church of La Merced, just as was done 100 years ago when the first movement for independence in Central America was begun.

the contemporary struggles in Mexico and South America, the time seemed propitious for the demand of the rights of citizens in Central America.

It is indeed marvelous how quickly news from the corners of the earth reached such isolated centers as Managua in Nicaragua, Comayagua in Honduras, Cartago in Costa Rica, Guatemala City in Guatemala, and San Salvador in Salvador, for early in the nineteenth century these were the capitals of the political subdivisions in Central America. They had no telegraph, their irregular postal service, almost altogether confined to the ports on the Pacific Ocean, reached them, by devious changes, across the Isthmus of Panama; yet receive the news of the mighty upheavals in other parts of the world they did, and were stimulated thereby.

THE NATIONAL PALACE IN THE CITY OF SAN SALVADOR.

The capitol in San Salvador is one of the handsomest and most dignified public buildings in Latin America. During the centennial festivities it was beautifully illuminated, its whole façade being one brilliant mass of electric lights. At the corner (right, in the picture) a fine arch was erected by the Turkish colony resident in the Republic, and this handsome structure was another attractive feature among the many which marked the celebration in San Salvador.

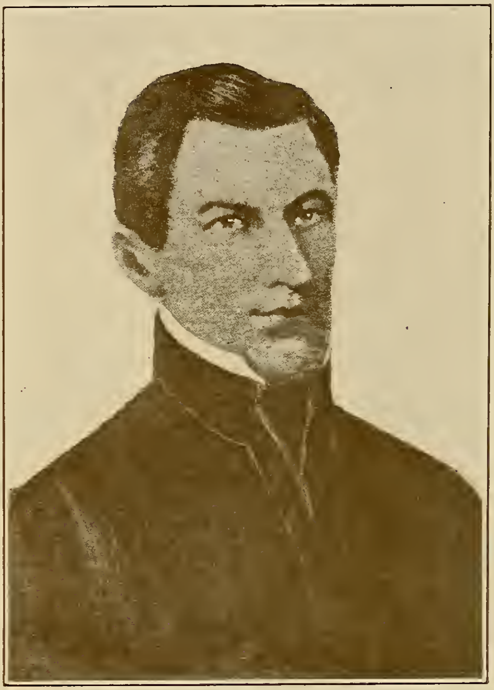
Men were no longer willing to live under the heel of despotism. In every city the more high-spirited resolved to stake their fortunes upon a stroke for freedom, but in Nicaragua and Salvador the boldness knew no limits. A serious attempt at revolution had its beginning in the town of Leon, Nicaragua, on the 13th of December, 1811, when the people deposed the intendente. This was seconded on the 22d of the same month at Granada, when the retirement of all Spanish officials was demanded. Other towns acted upon the same impulse. The disturbances were overcome, however, early in 1812. The plots were rash, undertaken without concert and almost without resources. They ended in nothing more than the determination in the breasts of a few to try again in more favorable times. But in Salvador an even more ambitious plot had antedated that in Nicaragua. The 5th of November, 1811, the day which now, as a matter of history, well merits celebration as its centennial anniversary rolled round, was chosen as the date on which to carry into execution the plot that had been devised. By an uprising, planned with care and some ingenuity, 3,000 new muskets and 200,000 pesos in the royal treasury at San Salvador, were captured. A large portion of the people of the city supported the leaders, and in many other towns assistance was given. In a few places, prosperous and still loyal to the King, this assistance was denied, so that the promoters, not finding the entire country behind them, were compelled to abandon the struggle, for the time being at any rate, and Salvador had to wait for a more favorable opportunity.

JOSE MATIAS DELGADO.

Delgado, one of the heroes of the first Central-American struggle for freedom from the rule of Spain, was a sincere and patriotic priest who early recognized the spirit of American liberty and was strong enough to give expression to it. He was born in 1767, led the revolt on November 5, 1811, and lived to see an independent Central American Federation. Delgado died in 1832, beloved by the entire population of Salvador.

José Matías Delgado and Manuel José Arce were the two men who stand above all the rest. Their patriotism to their native country and their intellectual zeal for the cause of liberty were manifested not only at the beginning, but also for the years thereafter until the victory was won. These two are the national heroes of Salvador.

Delgado was born in the city of San Salvador the 22d of February, 1767. He was graduated as a doctor in canon law from the University of Guatemala and became an official in the royal audiencia, which was the governing body of that time. After the attempt at revolution he was made a member of the diputación provincial, a body of seven members elected indirectly by popular vote for the administration of local affairs in the Province. The chief civil officer appointed by the King presided over the diputación. Through this body he agitated in favor of reform, and finally led the Junta Popular which proclaimed the independence of Central America. Later he was the head of the State of Salvador and bravely repulsed the attempted intervention of Mexico which the ambitions of Iturbide had fomented. He then represented Salvador as deputy to Guatemala and was the president of the first National Assembly of Central America in 1823. After other service in the cause of his country, he was put in charge of the parish of San Salvador and became vicar general of the Province of that name. Under him was built the parochial church of San Salvador (now the Church of Rosario), where his body lies to-day. Delgado died on the 12th of November, 1832, renowned for his piety, celebrated for his wisdom, and loved for his patriotism and goodness of heart. He was an eminent preacher and orator and left such a splendid record of both public and private virtues that he can with justice be called the most distinguished of the sons of Salvador.



MANUEL JOSE ARCE.

Arce was a national leader, not only of what later became the Republic of El Salvador, but also of the larger country, the Central American Federation. He was born in 1787, and with the priest Delgado was a leader in the first uprising in Central America in 1811. He persistently advocated the freedom of Central America, was the first president of that new country, and lived to see its dissolution into the present five Republics as they are known to-day. He died in 1847.

Arce was born in the city of San Salvador on the 1st of January, 1787. In the revolution of November 5, 1811, he acted shoulder to shoulder with Delgado, and after that event he continued working for independence. He was active in the later uprising of the 23d of January, 1814, and because of this he was taken captive and held a prisoner for six years. With Delgado again he declared for absolute independence, leading the patriot army against the troops of Iturbide sent to annex Guatemala, and acquitted himself well. When the Republic of Central America was organized Arce was chosen as the chief executive. In Nicaragua he soothed with exquisite tact the quarrels between the opposing political parties, and showed other great administrative qualities in such posts as that of inspector general of the army of Salvador. The highest honor conferred upon him was the election (April 21, 1825) to the position of first constitutional President of the Republic of Central America (Estados Federados de Centro-America). Arce died on the 14th of December, 1847, and was buried in the Church of La Merced in San Salvador.

Other prominent personages of San Salvador need mention. These are the priest Nicolas Aguilar, Manuel and Vicente Aguilar, and Juan Manuel Rodriguez. They with many zealous patriots had joined in the movement to free Central America, for it was the idea of a Central American federation which inspired them and not solely the hope of making Salvador free.

This, then, and in the city of San Salvador, was the very beginning of the struggle for independence in Central America, and this year the one hundredth anniversary of that beginning was celebrated. It deserves repeated notice that the principle on which the earliest uprisings were founded was not the political autonomy of any one subdivision of Central America, but the emancipation of that region as a whole. The purpose was to establish a Central American federation. This Republic was in fact established when independence was attained in 1825; it was recognized early in that year by the United States, by Colombia, by Great Britain, and the Netherlands. A Republic it remained until the dissolution in 1838. Only after 13 years was the decision reached that, until conditions permitted a better understanding of the relative needs of each Province or State, a separate Republic should be organized out of the territory which bore the individual names as we now know them.

Salvador therefore is justly proud of having been the theater of the original cry for freedom and the native land of the first President of the Central American Republic. The country received the hearty support of the four other independent nations of Central America, all of whom joined with Salvador in the festivities of the centennial. But in addition to the honor paid to the events in history, there was a strong purpose shown to prepare for the future, and to recall the early hopes of all Central America that a united federation might be a practical working plan within the new century just entered.

In fact, President Araujo (of El Salvador) in issuing his proclamation to the people, closed with these words:

> And in exerting ourselves to give to the celebration a luster and dignity worthy of the event it commemorates, let us keep clearly before us the purpose that its greatness must not be lost, and that in deed we should sincerely prepare ourselves to celebrate, in 1921, the year of the centennial of Central American independence, the re-formation with the other Republics of our Isthmus of a single Central American Government. This purpose will be the best offering we can make at the foot of the beautiful monument which Salvador is about to consecrate to the heroes of 1811. This, in my opinion, would be a fitting act on the part of our Government, the crowning glory of my political career; I pray that this union may be realized; and I should be willing to feel that, in virtue of such a result carried to a successful end by the free will of our sister Republics, I might perhaps be the last President of Salvador.

With such a spirit the invitations were issued. It had been decided not to make the event entirely international in character, but to restrict the official participation in it to representatives and delegates from the Republics of Central America, who were most vitally interested in the centenary commemoration. The invitation was dated the 21st of July, 1911, from the Department of Foreign Affairs, and was sent to the Governments of Guatemala, Honduras, Nicaragua, and Costa Rica through their respective ministers of foreign affairs. All were requested to take part in the celebration of November 5, 1911.

Replies, favorable in all cases, were received from these four Republics, and their delegates were at once chosen and officially announced. In the order of their acknowledgment of the invitation the list of special representatives is given as follows:

COSTA RICA: Excmo. Sr. Licenciado Don Manuel Castro Quesada, minister of foreign affairs and special envoy; Hon. Sr. Don Francisco Cabezas, secretary; Sr. Don Alberto González Lehmann, attaché; Srta. Angela Castro Quesada, Srta. Eva Rodríguez. Presbítero Andrés Vila, special attaché and chaplain of the army. As hosts [1] of the staff were Sr. Dr. Don Carlos Leiva and Sr. Dr. Don Francisco A. Lima, with Lieut. Coronel Don Angel Esteves, as military attaché. In addition there was a commission of young ladies appointed by the Ladies' Central Committee; these were Srta. Berta Palomo, Srta. Adela Machón, Srta. Tula Machón and Srta. Luz Ulloa Morazán.

GUATEMALA: Excmo. Sr. Licenciado Don Alberto Mencos, special envoy; Hon. Sr. Licenciado Don Francisco Quinteros, secretary. As hosts [1] of the staff were Sr. Don Salvador Rivas Vides and Sr. Don Rafael B. Castillo, with Coronel Don Julio A. Salinas, military attaché.

NICARAGUA: Excmo. Sr. Dr. Don Max. H. Zepeda, special envoy; Hon. Sr. Dr. Don Juan Manuel Siero, first secretary; Sr. Don Heliodoro Arana h., second secretary; Sr. Don Samuel Portocarrero and Sr. Don Alcibíades Fuentes, civil attachés; Sr. Don Alfredo Rivas, military attaché; Sr. Don Gilberto Lacayo, amanuensis. As hosts [1] of the staff were Sr. Dr. Don J. Antonio Quiroz and Sr. Dr. Don Arcadio Rochac Velado, with Sr. Capitán Mayor Don Manuel Antonio Castañeda, military attaché.

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[1] The Government of Salvador appointed a committee to act as official hosts to the official delegates from other Republics, and members of this committee were attached to each delegation.

HONDURAS: Excmo. Sr. Dr. Don Manuel J. Vargas, special envoy; Hon. Sr. Don Leonidas Pineda, secretary. As members of the staff were Sr. Don Roberto Aguilar Trigueros and Sr. Don Ismael G. Guentes, with Lieut. Coronel Rodolfo B. Morales.

The Central American court of justice was represented by Sr. Dr. Don Francisco Martinez Suárez and Sr. Licenciado Don Ernesto Martin.

The personnel of the committee in charge of the centenary celebration was as follows: Honorary president, the governor of the Department, Dr. Don Rafael V. Castro; active president, the mayor of the city of San Salvador, Dr. Don José Casimiro Chica; treasurer, Dr. Don Pedro S. Fonseca; secretaries, Don Fernando Aguilar A. and Don Bernardo Arce y Rubio, the other members being Pres. Dr. Don Santiago R. Vilanova, Don Francisco Gavidia, Dr. Don Ramón García González, Don Carlos Meléndez, Don Calixto Velado, Dr. Don Victor Jerez, Dr. Don Ricardo Moreira h., Pres. Dr. Don Francisco Moreno, Don Antonio Zepada, Dr. Don Emilio Funes, and Dr. Don Francisco Espinal.

SEÑOR DON FEDERICO MEJÍA.

Envoy Extraordinary and Minister Plenipotentiary of the Republic of Salvador to the United States.

Naturally the entire city of San Salvador was interested in making a success of the festival, and every club and social or industrial organization prepared some special entertainment or function to give particular emphasis to their participation in the exercises. The official program was ordered in this manner:

NOVEMBER 3, FRIDAY.

9.00 a. m.: Reception of special missions in the national palace.

10.00 a. m.: Inauguration of the Central American Medical Congress in the National University by the President of the Republic. Addresses by the Minister of Foreign Affairs and by the delegate from the university.

2.00 p. m.: Inauguration of the Students' Congress in the national palace.

4.00 p. m.: Inauguration of the Central American Labor Congress in the building of the Society of Artesans.

5.00 p. m.: Laying of the cornerstone of the (new) National Theater.

9.00 p. m.: Festival of Flowers, and address to those taking part in it, by the judge in charge, Sr. Don Román Mayorga Rivas, at the Teatro de Variedades.

NOVEMBER 4, SATURDAY.

7.30 a. m.: Military exhibition of horsemanship, and equestrian contests in the Campo de Marte.

10.00 a. m.: Meeting of the faculties of jurisprudence of Central America, and inauguration of the bust of Dr. Don Pablo Buitrago. The President of the Republic presided.

4.00 p. m.: Floral offerings at the tombs of the heroes Delgado, Arce and Aguilar, and inauguration of the statues to Columbus, Las Casas and Viteri. The President of the Republic presided, and the official march was begun from the Municipal Palace.

9.00 p. m.: Patriotic celebration in the Teatro de Variedades, organized by the Ladies' Guild.

NOVEMBER 5, SUNDAY.

12.01 a. m.: The President of the Republic rang the bell in the Church of La Merced, just as was done 100 years ago when the first movement for independence in Central America was begun. A salute of 100 guns followed, and then the bells in all the churches of the Republic were chimed at a signal given by an electric button, touched by the President, to all the towns and the people of the country. Immediately after, there was a reception given to all the Delegates from Central America.

8.00 a. m.: Military parade in the Campo de Marte.

10.00 a. m.: Dr. Don Rafael Víctor Castro, president of the Central Patriotic Society, delivered the monument of liberty to the Government of the country. The President of the Republic replied. Then the (new) centennial hymn, composed for the occasion by Don Calixto Velado, was read by the author and sung by the girls of the schools of the city. A military parade to salute the monument closed the ceremony.

12.01 p. m.: Banquet to the delegates, given by the National Government.

9.00 p. m.: Grand ball at the Casino Salvadoreño to the delegates.

NOVEMBER 6, MONDAY.

8.00 a. m.: The ceremony of the oath to the flag, taken by the army and the schools, in the Dueñas Park, conducted by the President of the Republic.

10.30 a. m.: Laying of the cornerstone of the medical school; visit to Rosales Hospital; address by Sr. Dr. Carlos Leiva.

3.00 p. m.: Reception at the council palace in honor of Spain. Address by the mayor of San Salvador.

8.00 p. m.: Venetian night festival in the Finca Modelo Park, given by the Salvador Sporting Club to the Central American delegates.

NOVEMBER 7, TUESDAY.

8.00 a. m.: Inauguration of the bust of the hero Isidro Menéndez, in the Avenida Independencia, with an address by Dr. Salvador Rodríguez.

3.00 p. m.: Exhibition of marksmanship in the Campo de Marte, and distribution of medals to the soldiers who are thus rewarded for good conduct and faithful service.

9.00 p. m.: Grand ball in the International Club to the Central American Delegates.

These are the bald facts of the celebration, and they demonstrate with how much sincerity and enthusiasm the official world of El Salvador entered into the spirit of the event. In addition, however, must be mentioned many other features not given in detail in the program just cited. Each day the hours, not devoted to state functions, were filled with entertainment; every class of public-minded citizen or resident of the capital or of the country was offered ample opportunity to manifest in some way the pleasure to be derived from the thought that a century had passed since the cry for independence had been raised, and that the promise for constructive government was brighter now than ever before, and that the idea of a larger country, not alone in the territorial sense but also in the force of accomplishment, was taking firmer root.

Only those who know Latin America can appreciate the brilliance of the scene when on the first day, November 3, at sunrise, a salute of 21 guns was fired and the flags were raised—simultaneously, it was decreed—to the top of all the masts in the Republic. Then again the picturesqueness of the scene must be left to the imagination rather than to attempt to relate it when at 8 o'clock that same morning a wave of little children overwhelmed the public park called Dueñas, they

THE CEREMONIES AT THE DEDICATION OF THE MONUMENT OF LIBERTY.

On the one-hundredth anniversary of the first Central American cry for liberty—November 5, 1811—the monument to liberty was presented to the nation. Its purpose is to perpetuate the memory of those heroes who began the struggle for freedom in 1811. Great crowds attended the ceremony, which was conducted by the President of the Republic, Señor Dr. Araujo in person. The monument is placed in the Dueñas Square at the center of the city. It is formed of bronze and marble, is 16 meters (not quite 53 feet) high. On the top is a figure of Glory; at the base one of Liberty. The faces carry the busts of Delgado, Arce, Rodriguez, and the coat of arms of Salvador. Other decorations are to be found at the four corners of the pedestal.

themselves almost buried beneath the masses of flowers they carried for the occasion. About sunset of this first day an allegorical float prepared by the central patriotic committee was drawn through the streets, and as night settled over the city it was made gay by the illumination of a triumphal arch in front of the national palace, and by the thousands of electric lights that blazed from the principal buildings, both public and private, in all parts of the city. A formal concert also was given that evening in the Dueñas Park, although military bands played in many other squares or open spots. The modern spirit must be noted in this day's celebration, for the three congresses, while they might touch upon the history of their important movements, yet essentially they looked ahead, and their great influence will be upon the future; their activities will be characteristic, not of the nineteenth but of the twentieth century.

On November 4 the sunrise was again welcomed by a national salute and a solemn mass was celebrated in the church of San Jose, the ancient parish of the priest Delgado, who was one of the patriots of the original revolution. Music, processions, and floral displays constantly filled the senses with delight at different periods of the day, the evening being enlivened as before by out-of-door diversions so suitable to the delicious climate of San Salvador.

On November 5, the central day of the celebration, the recognition of the anniversary began at midnight, when the President of the Republic tolled the identical bell whose tones rang out at the impulse of the priest Delgado 100 years ago. Then once more a salute at sunrise, processions grave and gay, banquets, speeches, and social gatherings. As was to be expected, somewhat greater formality attended these events, because the new century had begun. An attractive feature was the recitation by the author and singing by a great body of school children of the centenary hymn composed especially for the occasion.

Practical results marked the procession of the days, as well as incidents commemorative simply of the anniversary and the event it marked. There was a Central American Medical Congress which gathered together the scientific minds of the five Republics, and in its meetings discussed many problems for the good of the country. In connection with this, was the cornerstone laying of the new medical school attached to the university, for although the medical faculty has long been justly recognized as one of the most progressive in Latin America, and has shown ambitious work in the Rosales Hospital within the city, yet it has not had a real building of its own in which its classes and clinics could be conducted. When ready for occupancy it will be therefore not only a practical home for science, but also a memorial of the century's growth. Moreover, a new avenue—the Alameda "5 de Noviembre"—was inaugurated. Many new monuments, as stated in the program, were dedicated as lasting embellishments of the city, while memorials of Columbus, Las Casas and Bishop Viterio, the gift of Father Funes, were unveiled in Rosario church. Also the new national theater, to take the place of the historic edifice burned in February, 1910, was begun. This will be a token of the devotion of the people, truly Latin, to the love of art, not to be overcast by their newer regard to science.

THE MONUMENT TO LIBERTY IN SAN SALVADOR.

November 5 is a day of mark for all of Central America, as on that date, 100 years ago, the first effort for independence in Central America was made. The beautiful monument commemorative of that event was publicly delivered to the nation on November 5, 1911, at the height of the centennial celebration held by the Republic of Salvador in the capital.

The foreign residents took part in all the functions with whole-hearted zeal, and gave appreciation of their regard by liberal contributions to the various entertainments.

The Turkish colony erected a fine decorated arch in front of the Capitol, and the electric illumination of it at night enriched the whole scene. The Chinese colony aided both by their experience and in material ways to the attractive pyrotechnical displays that marked the evenings. The Spanish residents were helpful in the restoration of the old Vega bridge, which is now to be called the Spanish bridge in honor of the event of its public use on November 6. Costa Rica, too, contributed an attractive arch at a corner leading to Dueñas Park; and the German residents gave a statue of Delgado, placed in the patio of the university.

Throughout the country, too, the people participated in local ceremonies of their own, arranged to correspond to those carried on by the national and city governments in San Salvador. One commendable feature in the Republic of Salvador is the widespread extension of the telegraph and telephone service; in even the smallest hamlets a telegraph desk and a telephone booth can be found, and from them messages of any kind, commercial and official, can be dispatched throughout the day to any part of the country expeditiously and at a small expense. Using the means already at hand, it was possible for committees in any town or even village to keep close touch with the happenings of the capital, and it may be therefore assumed that practically a simultaneous celebration of the centennial was held in all corners of the Republic.

THE MUNICIPALIDAD IN SAN SALVADOR, ILLUMINATED FOR THE CENTENNIAL.

This is the public building in which the city officials conduct the affairs of the municipality of San Salvador, as a civic in distinction from the national organization. It is situated on the Dueñas park, in the center of the city. During the festivities of the centenary it was artistically decorated and at night made brilliant by groupings of electric lights.

Nor was the recognition of the day restricted to Salvador. Many cities in the four other Republics of Central America took official action and recognized the 5th of November as a holiday for both schools and business. Typical of this feeling certainly was the respect to the sister Republic of El Salvador, paid by the southernmost nation of the group, Costa Rica. The day was declared a national holiday; all the cities and towns were encouraged to give expression of their recognition of the event by some local festival, and in San Jose, the capital, a very pleasant note of sympathy was struck. In the pretty national park of that city over 2,000 school children gathered; they were addressed by the President of the Republic, by other officials of the Government, and by prominent citizens; they saluted the flags, and then, in a well-trained chorus, all those present joined in singing all the five national anthems of the Republics of Central America, as if, fusing them thus into a harmony of song, the ultimate destiny of those nations that had by territorial necessity and by common interests been born together, would finally unite for the good of all.

It is not saying too much that the whole world will take up the symbol. A united Central America was once a fact; it has been for years a dream, but the future may prove the value of making it again an actuality.

PRESENT PROGRESS ON PANAMA CANAL[1]

THE canal more than three-fourths completed! Such in general terms is the point of progress reached in the work of constructing the isthmian waterway to-day (November, 1911). Those intrusted with carrying out the plans of this work—a work which no adjective can correctly qualify—have been so engrossed with the different tasks in hand that the sum of the aggregate accomplishment grew almost without their definite realization of its extent. The publication of an official circular on September 25, 1911, headed "Reduction of force," was a concrete expression of the fact that the work had passed its zenith. The manual-labor problem had been of the most perplexing character during the first period of digging and dredging, so when in the above-mentioned circular it was set forth that there appeared to be a surplus of both European (Spanish) and West Indian labor, and that it might prove necessary to resort to wholesale repatriations, this marked the first days of the final stage.

It also turned the thoughts of those Americans who are giving their best efforts to completing "the job" to the future. Each completed section of the work will mean that these also must seek other employment. No better proof that the canal is nearly finished is needed. To get an idea of the actual stage of the work let us examine it in detail. This is easily done, for Col. Goethals in his genius for administration has so systematized the work that the whole scheme is readily understood by even the most untechnical. "The line," as the canal route is called, is divided into three divisions—Atlantic, Central, and Pacific—each comprehending a fixed part of the total necessary construction.

Before detailing the character of work being done along the canal route it may be well to state that there are no new engineering problems involved. Nothing revolutionary is contemplated. Even the general idea of the present plan was considered by the French, to whom must be given the credit for conceiving what is perhaps the most remarkable feature of this titanic work—the Gatun Dam and spillway. The locks are much the same as those built at Sault Ste. Marie, with certain improvements suggested by experience. The digging and dredging are such as are incidental in the building of every canal, being extraordinary only in the amount of excavation to be done.

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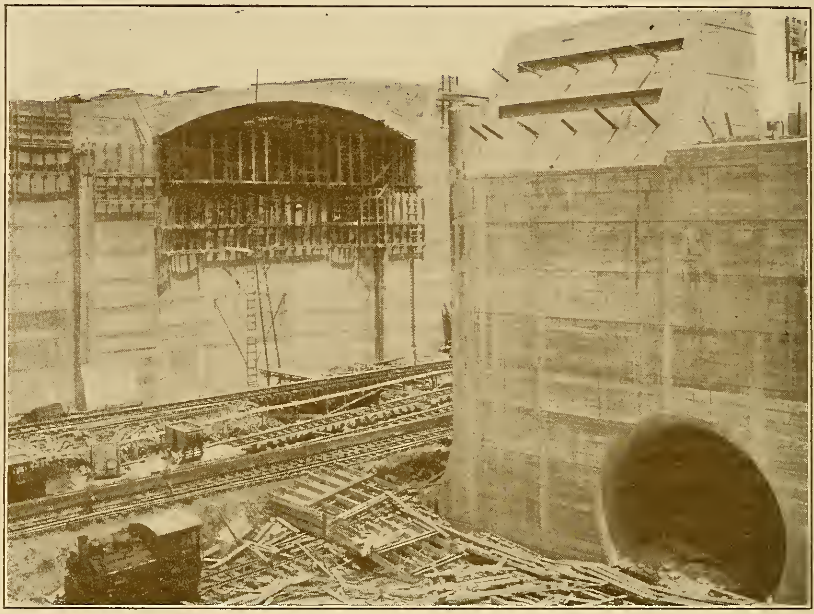
[1] By Granville Fortescue of Pan American Union Staff.

The Atlantic division extends from the deep-water channel being dug on the floor of the Caribbean, and includes what will be the sea level Atlantic Canal which ends in the three flights of the Gatun Locks. The dam and spillway are necessarily included in this part of the work. This section is $7\frac{7}{10}$ miles in length. The Central division is the longest, being $31\frac{7}{10}$ miles, wherein the work is entirely that of excavation, if we omit the labor involved in the relocation of the Panama Railroad. The Pacific division measures 11 miles from the Pedro Miguel Locks, including the Miraflores Locks, and of course the excavation between these two, to the sea level canal on the Pacific side, which will be carried to deep water.



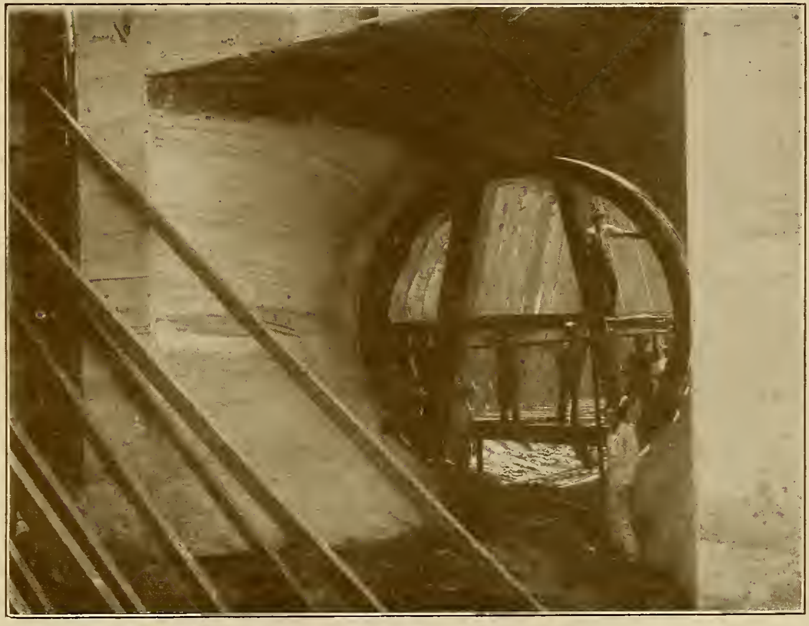
THE LOWER END OF EAST SIDE OF PEDRO MIGUEL LOCKS.

The bottom of the locks will of course be covered finally by the water which will occupy them, but construction work is carried on in the way the picture shows. The character of the work is the same as that in Gatun, but only one flight or lift is necessary. At the Pedro Miguel Locks the Pacific Division of the Canal begins.

As this paper deals more particularly with canal construction work alone, little reference will be made to the immense amount of municipal engineering and building construction, as well as the sanitation work which has been a necessary adjunct of the main problem.

Perhaps a more comprehensive understanding of the present condition of the canal work can be gained if we make an imaginary trip from Colon to Panama, following the line. The beginning of this trip will have to be from the Caribbean Sea, through Limon Bay. What first calls our attention is the breakwater of a little more than 2 miles in length, being built from Toro Point, on which is situated a light, out in a southeasterly direction. Work on this breakwater was begun as late as August, 1910, and already approximately a mile and a quarter (7,000 feet) of the work has been laid. It is proposed to build another breakwater east of what is the entrance of the canal in order to protect Colon Harbor. This breakwater, which would be about one-half the length of the western sea wall, has not been started at this date.

Passing Colon light we find ourselves directly in the canal, which has been completed for a distance of over 5½ miles to its full width—500 feet—and an average depth of over 30 feet. Here we see the big sea-going dredge *Ancon* busily churning up the ocean bed; and perhaps one of the old French ladder dredges, three of which are still in commission, will be at work when we pass, and certainly the two new dipper variety of mud excavators will be in operation. We cross the line of the old French canal, and our water journey ends. Let us continue our imaginary traverse of the waterway on foot. Little has been done in the matter of excavation from Mindi, where the French channel crosses the American line to the situation of the Gatun Locks. The work is the simple problem of removing four and one-half million cubic yards of "wet" excavation, which, although only begun on October 1 of this year, is expected to be finished on January 1, 1912.

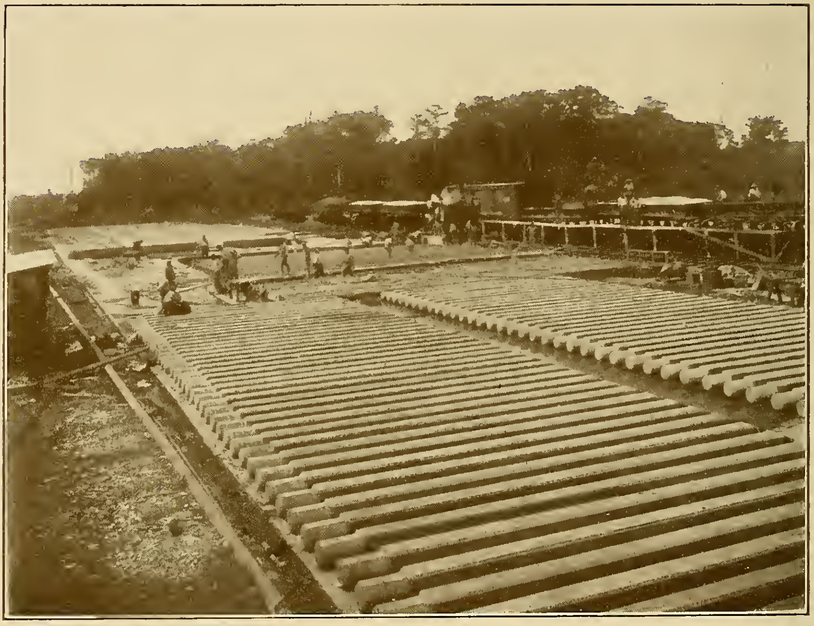


THE CULVERT TRANSMISSION CURVE AT GATUN LOCKS.

Leading from the Stoney Gate Chamber at Gatun Lower Locks is this giant culvert, 18 feet in diameter. Such drainage tunnels open into a number of smaller culverts which pass under the floor of the lock, all serving to empty and fill these locks in a remarkably short time.

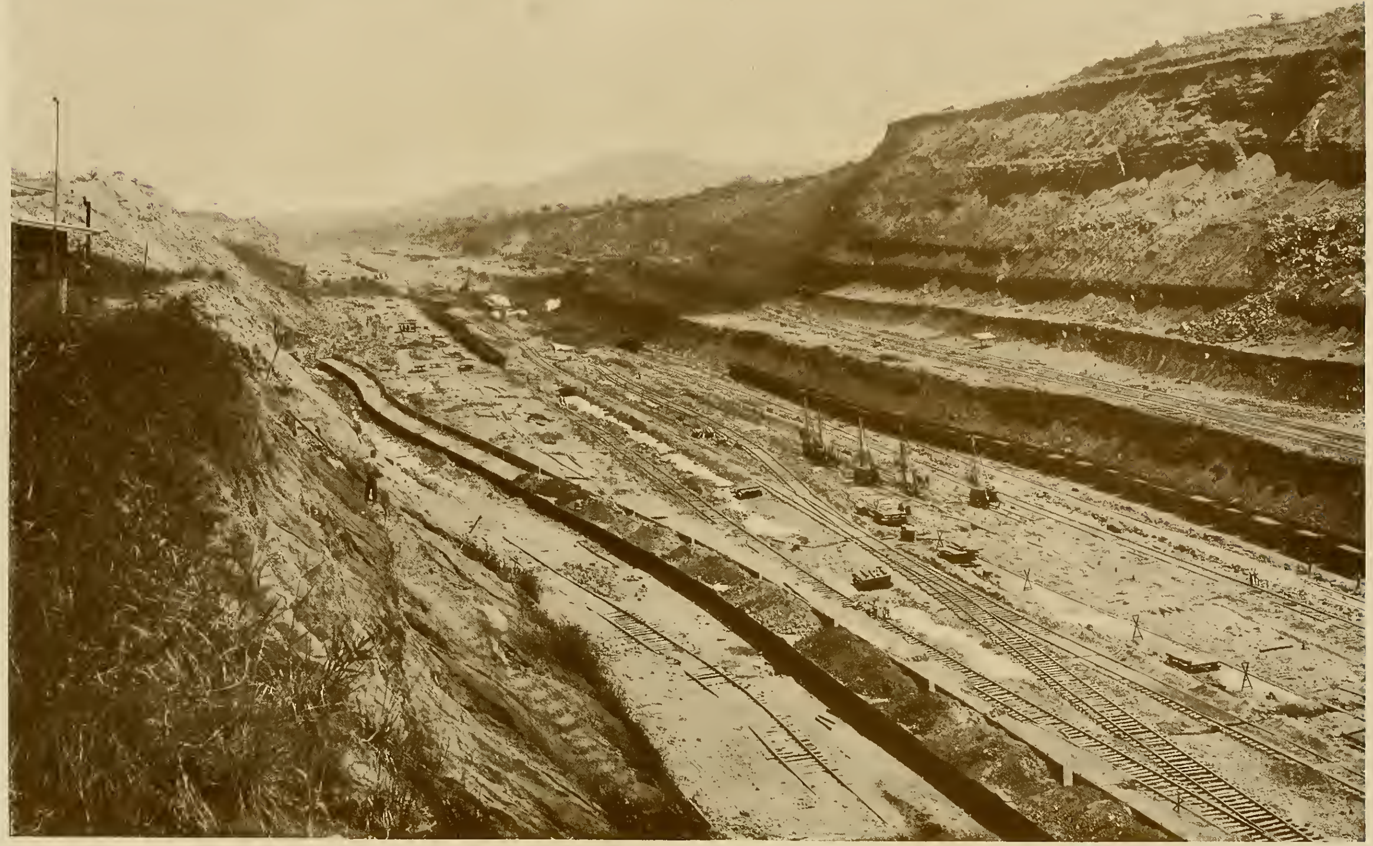
A small hill south of Mindi that sprawls across the line, and an insignificant amount of stone just north of the lock, make the total necessary "dry" digging in this section. As stated, little has been done here, in view of the comparative ease with which the work can be carried out when once commenced.

At Gatun we see the reason for Col. Goethals's urgent call for canal legislation. There is something very tangible in the nearly completed concrete chambers and the mighty steel-built gates that close them. The six double locks planned for the canal route are now nearing completion, and a description of the triplicate ones at Gatun will hold for all. The usable dimensions of the chambers, which are built of concrete, are 1,000 feet by 110 feet, but as the locks are laid out in pairs their construction means the erection of two side walls and a center dividing wall. The side walls are 45 to 50 feet through at the level of the floor surface of the chambers, perpendicular on the inner face and narrowing from a point about 24 feet above the floor until they are 8 feet wide at top. The center dividing wall will be 60 feet wide, approximately 81 feet high, with vertical faces. Down the interior of this wall a U-shaped tunnel extends, which is divided into three galleries—one for drainage, one



REENFORCED CONCRETE PILES CONSTRUCTED FOR GATUN LOCKS.

These piles are used in the foundation of 850 feet of Gatun Lake. They are rectangular in cross section, reenforced by four longitudinal angles near the four corners, connected at intervals of 18 inches by lateral straps. On the lower end of each pile is a cast-iron shoe, while the upper end is reenforced to give strength for the blow of the driver. These piles are driven to a depth of 18 to 60 feet; it is estimated that 3,500 will be required for the foundation.



CULEBRA CUT LOOKING NORTH FROM CONTRACTORS HILL.

The heavy foot of the Culebra "slide," at the east bank, is well shown, and the various levels of activity are plainly marked. This is the backbone of the continental divide, and, from the very beginning of canal study, has been the greatest impediment to canal progress, while the removal of the hill has been of the greatest importance to all plans. Slides have at times caused serious disturbances in the cut, but engineers have now practically estimated all possibilities.

for electric wires controlling gate and valve machinery, and the other will serve as a passageway for the chamber operators. The side walls are also pierced from end to end by a drainage tunnel, which will serve to flood the chambers through the lateral floor valves. A most ingenious reciprocal system of emptying and filling the locks has been contrived that permits either operation to be performed within 15 minutes. The drainage tunnels in the center and side walls already referred to are culverts about the area of the Pennsylvania Railroad tunnels under the Hudson River. These open into a number of smaller culverts from 33 to 44 square feet in area, which pass under the floor of the lock, opening into the chamber through manholes.

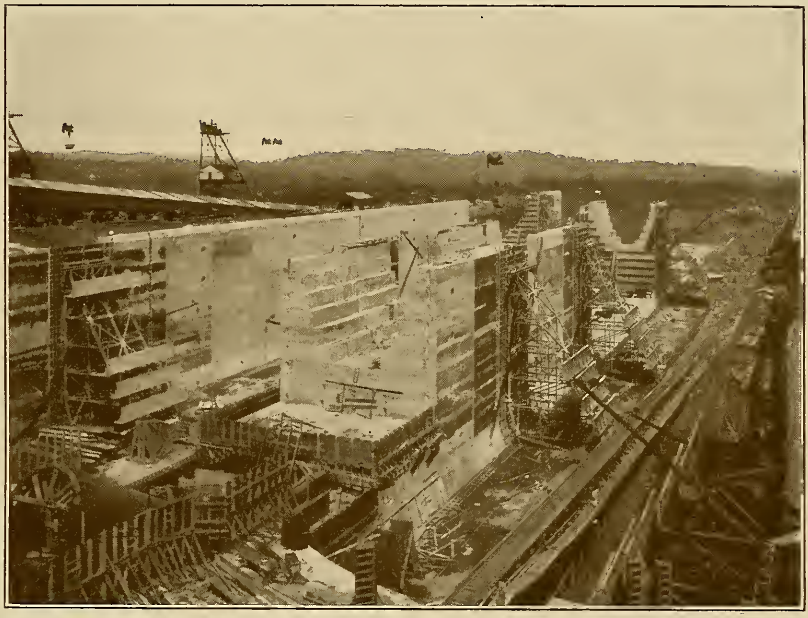
A saving of water is effected by feeding through the center culverts by means of laterals from one twin chamber to another. The vastness of the work involved may be better understood from the fact that already about 1,700,000 cubic yards of concrete has been laid in the so far completed work of the Gatun Locks. As 2,000,000 cubic yards approximate the amount of concrete necessary in the total construction of these locks, it is quickly seen how little remains to be done at this point.

The steel gates that will close the lock chambers merit the adjective gigantic. As high as a six-story house, the larger of them weighing 600 tons, they close across from wall to wall steel portals 7 feet thick.

If the gates that will lock the route of the canal were piled as blocks one upon the other they would reach an altitude higher than the topmost point of the Singer Building, and they would weigh the enormous total of 57,000 tons. Passing through the pair of recently erected gates, we turn to the right for our view of the great dam and spillway, which will hold back the waters of the Chagres River until they rise and cover an area of 164 square miles and bring into being the Gatun Lake. The dam stretches from the lock wall nearly a mile and a half away to the hills in the southwest, and its crest will be 115 feet above mean sea level. Nearly a half a mile wide at the base, it narrows to a width of 100 feet at the top. Already this work has been completed to the height of 90 feet, while the waters of the Chagres are led through the concrete-lined spillway to-day.

Leaving the dam and spillway we find that we must continue our trip by water, as the Gatun Lake is now raised to a level of 14 feet, and it is the plan to raise it to 55 feet next rainy season. Already the water covers a considerable area, and when it is brought to its full height of 85 feet it will be 164 square miles in extent—a small inland sea—with a channel varying from 1,000 to 500 feet leading across its center. The advantages of this feature of our canal are at once apparent. Here we have a great body of water where it will be possible for steamers to proceed at full speed under their own steam, pass one another, and anchor if it becomes necessary.

We now proceed for about 23 miles, until the hills closing in on both sides tell us that we are coming to Bas Obispo, the entrance to Culebra Cut. On foot again, across a temporary dam which keeps the water of the Gatun Lake from backing up into the cut, we get our first view of the indescribable activity that is concentrated in this 9 miles. The overwhelming impressions are noise and motion. The almost human steam shovels puffing, clanging—yes, grunting like giants straining in toil. The long rumbling noise of the never-stopping dirt trains cut by an imperative impatient whistle of the locomotive when some switch is slow in clearing. The cannon cracker explosions of the ''dobe'' shots, small dynamite charges that serve to break those bowlders that baffle the incisors of the steam shovel. The never ending pound! pound! pound! pound! of the compressed-air drills, myriad in number. All these and many minor noises combine to make a chorus that is a fitting accompaniment to work of ''digging the ditch,'' to borrow the popular phrase.



THE MIDDLE LOCKS AT GATUN.

The concrete chambers of the immense Gatun Locks are nearly completed (November, 1911), but even such a picture fails to convey an idea of the tremendous size of the structure. Each chamber is 1,000 feet by 110 feet, but as the locks are laid out in pairs, the erection of two side walls and of one center dividing wall was necessary. The side walls are 45 to 50 feet through at the floor level. This photograph, looking north from upper lock, shows with greatest prominence the center wall, which will be 60 feet wide, about 81 feet high, the faces being vertical.

The great raw sides of Gold and Contractors Hills, where the backbone of the Continental Divide has been severed, loom high

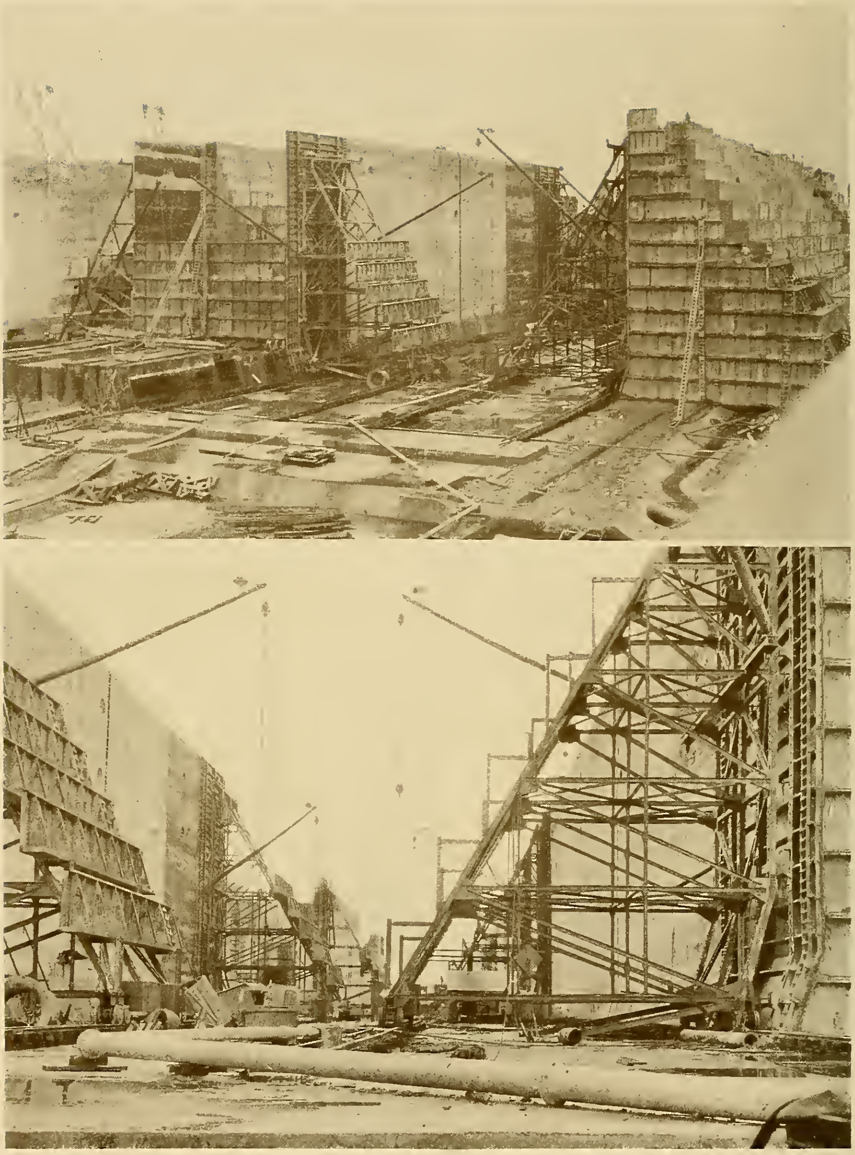
THE SEAGOING SUCTION DREDGE "CULEBRA," NEAR NOAS ISLAND.

The gap between the shore at Balboa and Naos Island, parallel with the channel of the canal at the Pacific entrance, a distance of about 15,000 feet, is almost completely filled by a breakwater, which will add materially to the use of the canal. This was not in the original French plans; in fact, the breakwater crosses the old French project, the later surveys showing that a more substantial and permanent passage is thereby secured.

above us, some 300 feet, as we walk through the cut. A few details will help our better understanding of all that is being done here. To loosen the earth and rock before it can be handled, the bed of the cut is drilled and dynamited, as is customary. As many as 75 miles of drilling will be done in one month, while 500,000 pounds of dynamite are used during the same period. In a good month the dirt trains will carry out a million and a half cubic yards, distributing it at points 25 miles distant. Twenty-three dirt trains per day, each carrying about 400 cubic yards, is an average. The steam shovels can dig out and load 1,800 cubic yards per day, and much higher records have been made under pressure. Number 26 shovel at Monte Lirio took out 4,100 cubic yards of rock on September 20 of this year. Although this was done on the work of the relocation of the Panama Railroad, equal records have been made at times in the cut. To get an idea of how much dirt the first figure, 1,800 cubic yards, really is, given an average city block, and it would cover it to a height of 2 feet.

The original estimate of the amount of excavation necessary in the Culebra Cut section was over 97,000,000 cubic yards and there now remains less than 19,000,000 cubic yards of earth to be taken out. Under favorable circumstances this is hardly 15 months' work. An important work that is being carried on coincident with the cut excavation is the relocation of the Panama Railroad made necessary by the creation of Gatun Lake, the present line running along what will be the bed of this body of water. The plan is to move the roadbed to high ground to the eastward, and follow a route that will lead several miles back from the canal on the cut, although it is expected that eventually the railroad will be brought back and run along a berm on the Culebra Cut bank. The slides are in a measure the cause that forbids this last location of the railroad at present. There have been in all 21 of these earth slips along the cut, and they cover an area of 149 acres. Cucaracha slide, the largest, broke as far back as 1884 and has been moving ever since. These slides have only hindered the canal work by increasing the amount of excavation necessary—9,000,000 cubic yards being placed to the discredit of these breaks since 1905. But to intimate that they will in any way imperil the ultimate success of the canal work would be absurd in view of the decision of expert engineers who have made a thorough study of the situation.

Continuing through the 9 miles of the cut, we arrive at the Pedro Miguel Locks. These are being constructed along the same lines as those already described at Gatun, but here there is only one flight, and the work is much more nearly completed. Almost 90 per cent of the concrete has been laid, and the gigantic gates are going up so rapidly that it is almost safe to predict that they will all be hung by

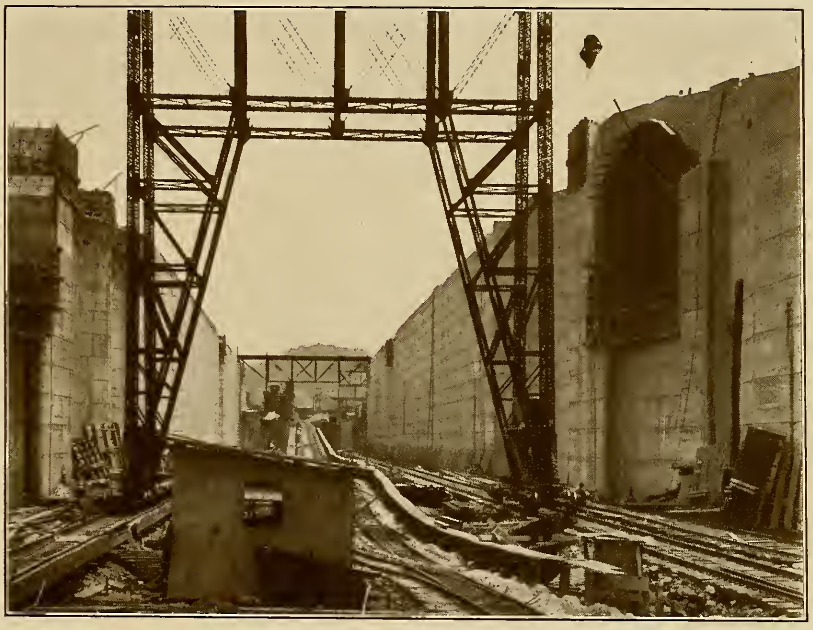


THE LOCKS IN THE GREAT GATUN DAM AT PANAMA.

Ships going through the canal will ascend to the 85-foot level through a series of three locks. These are double, and have a width of 110 feet and a usable length of 1,000 feet. They are constructed of steel and cement, and will probably be completed before the time set for the opening of the canal on January 1, 1915.

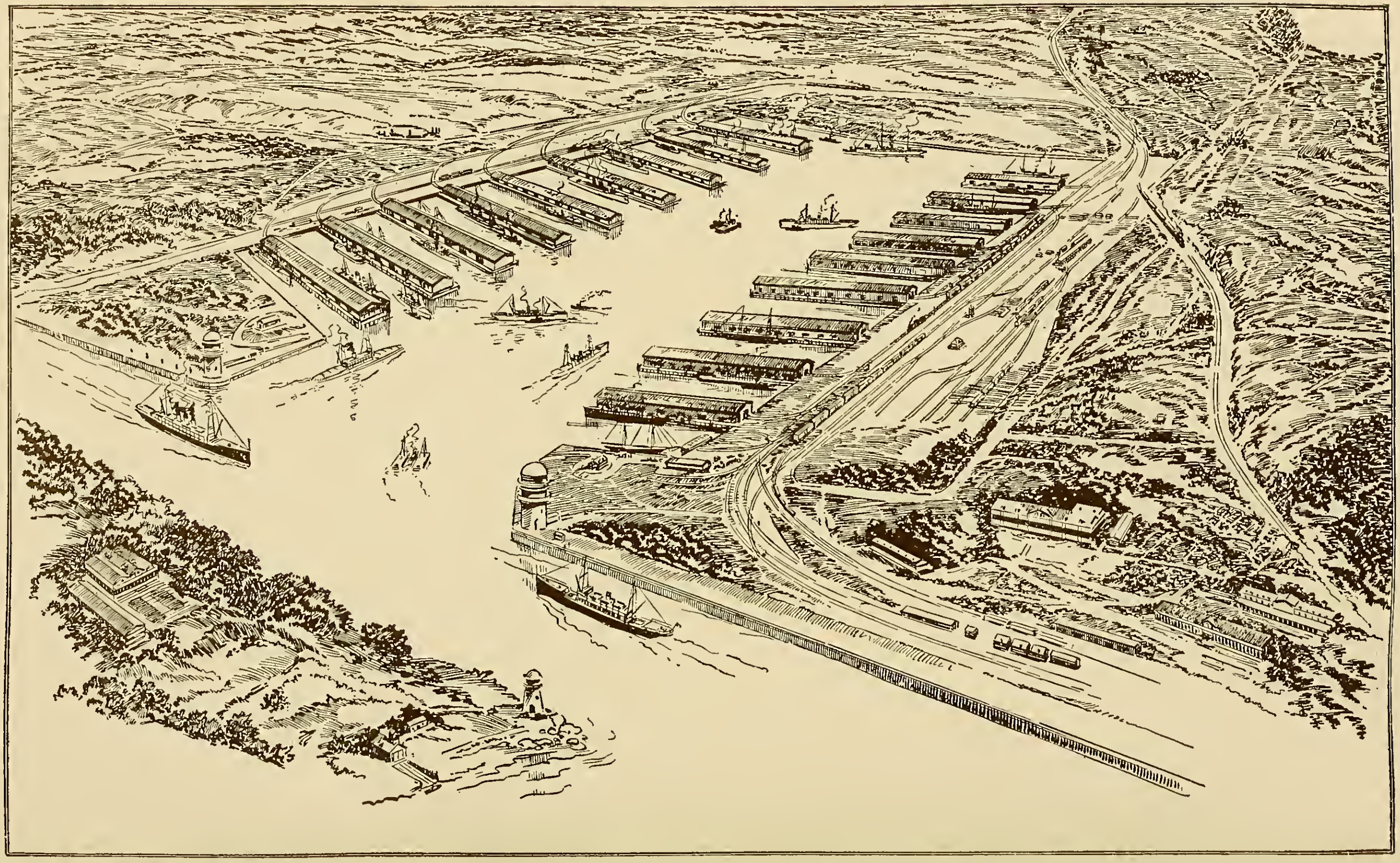
the 1st of January, 1912. Here it would seem that the work has so far progressed that the installation of the necessary machinery, safety devices, fender chains, buffers, electrical plant, and towing tracks could be begun any day. This is the final stage before turning the water through. The Pedro Miguel Locks mark the north line of the Pacific division, and the excavation here has been similar to that of the Atlantic side and almost equal to it, 42,055,403 and 43,357,345 cubic yards of digging and dredging being the respective estimates.

Leaving Pedro Miguel Lock we enter the basin of what will be Miraflores Lake, about 4 miles in area. There is but little digging to be done in the Miraflores section, the ground is low, and with the impounding of the waters of the Rio Grande the sand level will be quickly reached. Crossing the bed of the lake we enter the Miraflores Locks. Here the work is not nearly so far advanced as in the two other sets of locks through which we have passed. The skeleton molds waiting to be filled with concrete rise on all sides, marking the outlines of the finished walls. The great steel open-work crane that carries the never-stopping procession of cement buckets dominates the scene, and reveals to us the secret of the rapid construction process. Filling the concrete molds is only one-third completed here, as work was commenced considerably later than at Gatun and Pedro Miguel.



THE WEST CHAMBER OF PEDRO MIGUEL LOCKS, LOOKING NORTH.

The size of the locks can be gauged from this illustration. The work is now fully 85 per cent completed, and the water will shortly be let in. Then each space will be capacious enough to hold the "Olympic" type of vessel, the largest steamer afloat.



Courtesy of Popular Mechanics.

SKETCH OF DOCKS AND HARBOR AT PANAMA, TO BE LARGEST IN THE WORLD.

Included in the plans for the big waterway is provision for the largest and most completely equipped harbor and dock system in the world, to be located at the Pacific end of the canal. The piers will be 1,000 feet long and the slips between them 300 feet wide, thus permitting vessels like the "Olympic," which is 860 feet long, to dock with ease.

Descending the two steps of the chambers, we find ourselves in the sea-level canal again. For the first half mile the great pipe lines used in hydraulic dredging stretch in all directions, leading to dams being filled, or spreading the mud upon the swamps. In all the Pacific division there remain only about 11,000,000 cubic yards of wet and dry excavation to be handled. At this point in our imaginary journey we must employ a boat again, for there lie before us 8 miles of usable canal. Embarking on what was once the Rio Grande River, we pass between low muddy banks over a waterway 30 feet deep, that leads out into the Pacific.

First we pass the temporary dam that is being built in order to facilitate the work of deepening the channel to 45 feet, and then after several miles of uninteresting journey we sight Balboa, with the scraped side of Ancon Quarry Hill as a background.

The extensive system of docks and anchorage planned for this terminus of the isthmian waterway is under construction, and will be finished contemporaneously with the canal work. The need of the new docks has already expressed itself in the crowded appearance of the harbor at the present time. Leaving Balboa, we now steer alongside of the breakwater that stretches out toward Naos Island, which breakwater, because it is laid across the line of the French canal, has given much trouble in its building. There is still a wide gap to fill. But this does not prevent our sailing freely out over the Pacific, and as we pass Flamenco we know that we have come through the Panama Canal.

It has been the plan of this article to sketch briefly for the benefit of the untechnical the present appearance of the route over which the canal is building. It must always be borne in mind that an immense amount of auxiliary engineering work is also being carried out on the isthmus. Towns are brought into being, the courses of rivers changed, great repair shops erected and always busy, all involving municipal and other engineering work of a varied character. But all this is temporary. When the main work is done—when North shall be cut from South America—all these busy towns will pass, their inhabitants will scatter to the points of the compass, and save where the lock keepers live, the jungle will claim its own again.

ARGENTINE PLAINS AND ANDINE GLACIERS

WITH A DESCRIPTION OF THE SOUTH AMERICAN LOCUST.

THE book, Argentine Plains and Andine Glaciers, by Walter Larden, M. A., appeared almost a year ago (the preface is dated Oxford, December, 1910), but it seems to have attracted only slight attention from the reviewers either in popular magazines or in more serious publications which strive to offer a running commentary upon the new literature of travel and description. To be sure Argentina has within the last few years received abundant attention, and it is really a difficult task if an author sets himself deliberately to reproduce facts about the country, clothing them in such a garb that they will appeal with refreshing interest to a reader. Facts and statistics are hard to handle, yet the temptation is almost irresistible to incorporate plenty of startling figures into any sketch of Argentina. Now, this book of Prof. Larden's is different. It is a personal narrative, the result of two pleasure trips, 20 years apart, to the estancia of his brother, who had gone out to the "camp" of Argentina many years ago. So personal are these chapters that the author seldom thinks it worth while to inform himself with exactness on what does not interest him beyond the moment; he is careless, except in the appendix, as to statistics (or their simulacra), leaves the reader to guess, to look up the figures for himself, and to confirm or refute by some higher authority. When, on the other hand, the author touches anything that does really interest him, whether the subject be in the number of sheep on his brother's estate or the habits of the un-English animals he found and studied so carefully in the "camp," his subject is handled with much completeness. The reader, then, be he

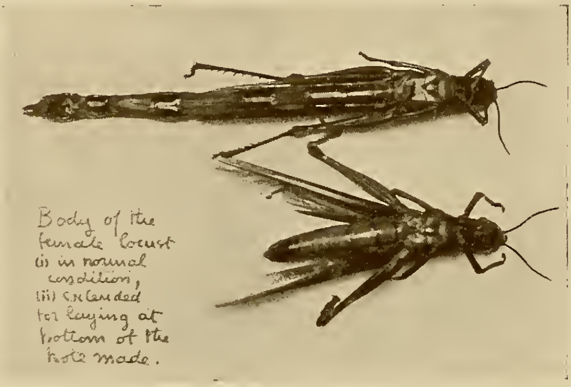
(Illustrations through courtesy of publisher of "Argentine Plains and Andine Glaciers.")

THE LOCUST OF ARGENTINA.

Schistocerca paranensis is the scientific name given to the particular locust best known in Argentina. The insect has its cousins in many countries, but each kind differs sufficiently to permit of definite entomological classification.

familiar or unfamiliar with Argentina, is carried along from beginning to end of the page in rare enjoyment of the text. It is always personal, and one feels as if looking at the picture with the writer's eyes. If he makes mistakes they are his own; nobody is harmed thereby.

There are chapters on "the voyage out," with descriptions of Buenos Aires and the city of La Plata; on the "history of the Estancia Santa Isabel," with many notes on camp life in the Argentina, and especially on the marvelous development of agriculture and land values in that country; on the routine work on an estancia—indeed, a chapter well worth studying by any person purposing to go into ranching there; on "a few of the Argentine birds," with further notes on beasts, reptiles, and insects. The trip into the Chilean Andes is also interesting, the personal experiences being the essence of the pages. Most of the illustrations are fine, and here again they present personal experiences, for the author is a good photographer, and reproduces his own views almost altogether. Thus the book runs on, and may be taken as a really valuable addition to current literature. Yet it might have escaped the reviewer's attention, had it not been for the chapter called "The history of a locust invasion." This carries the best picture of that plague of new countries, which has appeared in print. He writes:

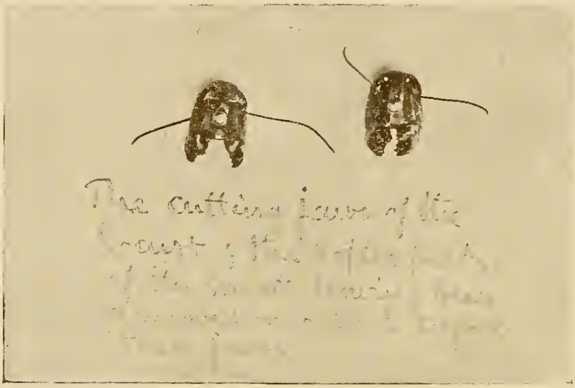

Body of the female locust (i) in normal condition, (ii) extended for laying at bottom of the hole made.

FULL-SIZED FEMALE LOCUST ABOUT TO LAY EGGS.

A large female locust (the males are smaller) measured as follows: Across the spread wings, $4\frac{7}{8}$ inches; tip of head to tip of closed wings. antennæ not included, $2\frac{13}{16}$ inches; tip of head to tip of tail, $2\frac{1}{4}$ inches; length of straightened jumping leg, $2\frac{1}{4}$ inches.

> About the middle of October, not long after I arrived at the estancia, I went one day and climbed up on to one of the windmills to view the country and its emptiness. The gulls, of which a number always stay about each estancia, appeared to be rather excited and looking up toward the sun I thought that I saw the reason. For high up there was a thin drift of locusts, whose gauzy wings caught the light and made glittering specks in the sun; away from the sun I could see nothing, for they flew high and in very open order.
>
> On October 25 we drove out to visit some colonists, and at first things were as usual, though no doubt had my attention been called to it I should have noticed a haze on the horizon.
>
> But soon we were in a drift of locusts and, seen edgewise, the cloud (which I supposed covered many square miles) formed a purplish haze that made the horizon, usually as sharp as the rim of the sea, quite invisible.
>
> On our way home we passed a hut that had some willows around it. The locusts had alighted on these and loaded them, clinging on with their heads pointing upwards.

And I noticed for the first time the curious glimmering, streaky appearance that this locust load gave to the trees. These swarms of locusts came, so it is believed, from the Gran Chaco and other vast empty regions farther north. They came for some eight or nine days to breed and to lay eggs; they practically ate nothing—that was not their business then. Night after night they roosted, out of reach of the dew, and yet I could not find any signs of eating, only some of the vegetables in the garden suffered a little and here and there some maize was touched. As the sun dried the herbage they descended from their roosting places to the ground, and during the latter part of the eight or nine days, when laying began to be conspicuous, they got very sluggish and no longer rose; one trod on them. The locusts choose for their laying grounds bare earth, fairly well beaten and hard; in fact the roads receive most of the eggs.



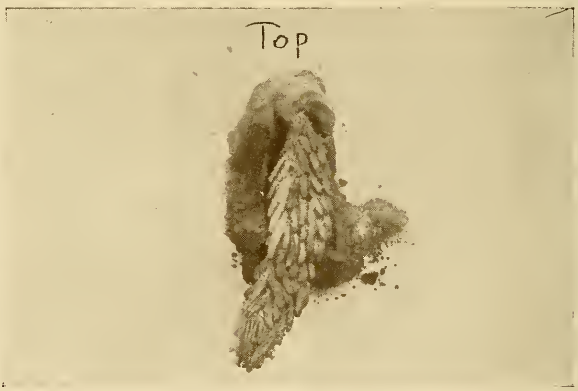
THE JAWS OF THE LOCUST.

At the end of the tail is a pair of jaws, two talons bent upward on the upper "jaw" and two bent downward on the lower "jaw." The jaws are thrust, closed, into the earth and then opened out; thus, bit by bit, a hole is made and the body pulled into it by the resistance of the jaws and anchored at the bottom.

The first swarm (manga) came on October 25. The laying was on October 31, November 1, 2, and 3. On November 3 the numbers had lessened considerably, and on November 4 the locusts had gone, leaving behind them the seeds of a plague that must be seen to be believed in. But the crops and grass were uninjured so far. What can be done? To drive sheep over the laying locusts or to beat them with wire flails produces a heap of slain. But half an hour later all is covered again. And then look at those miles and miles of roads, all laying grounds, running everywhere through the empty land!

If seven maids with seven mops—

we all know Lewis Carroll's poem. I believe that the best chance of reducing the plague would be to plow and harrow all roads after the laying locusts have gone and before the eggs get so ripe as to be hatched. But it is a hopeless task at present—the population is far too scanty for the work.

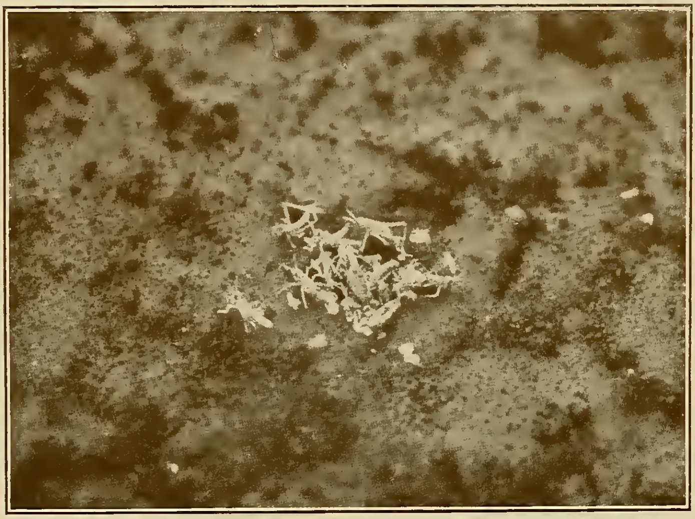


A BUNCH OF LOCUST EGGS.

The female locust bores holes in the earth with an ingenious pair of jaws at the end of the tail. She gradually sinks into the ground, the tail extending meanwhile to twice its length. Eggs are then laid in an elongated bunch covered with a glutinous foam which dries up later, serving to cement the eggs together. A bunch contains from 80 to 100 eggs.

The laying locusts had gone and things looked as usual again. I did not at all realize the inevitableness of the coming invasion. But about three weeks later I saw the men putting "tin petticoats" on the fruit trees and surrounding part of the garden with a tin barrier 18 inches high. And then one day, it was November 27, i. e., the predicted month after the beginning of the laying, some one said to me, "They are hatching out on the drive." So I went to look. A harmless-seeming sight it was. Here and there were to be seen a few white specks and some little green things. I examined more closely and saw the little wingless locusts, about one-fourth inch long and of a tender green, scrambling up out of the earth, quite regardless of each other's feelings, and soon scattered. It seemed to me that in a few minutes or in a quarter of an hour they got dark in color.

The general history of the *Schistocerca paranensis* (the entomologic name of the Argentine locust) is one of progress from stage to stage; in each stage there is growth and then a change of skin, a further and more abrupt increase in size at this change being very noticeable. And there are, I read, six changes of skin. But the advance of the locust from its first hatching through these various stages was rendered less easy to observe, owing to the fact that there was on the estate a mixture of swarms of various dates of hatching. Certainly there were at least three stages in evidence at one and the same time up to near the end.



HATCHING OUT OF THE LOCUSTS.

The swarms of locusts (Langosta in Spanish) which appear from the north when they begin their invasions, come to lay eggs about eight days after arrival. They practically eat nothing then. A large female measures 4⅞ inches across the spread wings and from tip of head to tip of tail 2¼ inches. She lays a bunch containing 80 to 100 eggs, deposited in a hole about 3 inches deep. A month later hatching begins. The young locust is wingless, green, ¼ inch long, and comes straight from the egg to the surface of the ground, as is seen in the illustration, still bearing fragments of the shell. It begins to grow at once.

Locusts are "saltonas" (hoppers) until the last stage is reached, when they come out with wings and are mature locusts, and then they are called "voladoras" (flyers). But during the first few stages they have the nickname of "mosquitoes," this word, familiar to us otherwise, being merely a diminutive of "mosca," meaning a small fly. Nature appears to make one or two attempts to provide the creature with wings before she finally succeeds. In the last change of skin but three the saltona emerges with minute but quite visible abortive wings; in the next, with wing pads rather larger; while in the last stage of saltona they are very conspicuous though still quite useless. At the last stage (viz, to the voladora) they come out with full-sized wings, though these are at first damp and crumpled up. Nature seems then to make a big jump and to succeed suddenly.

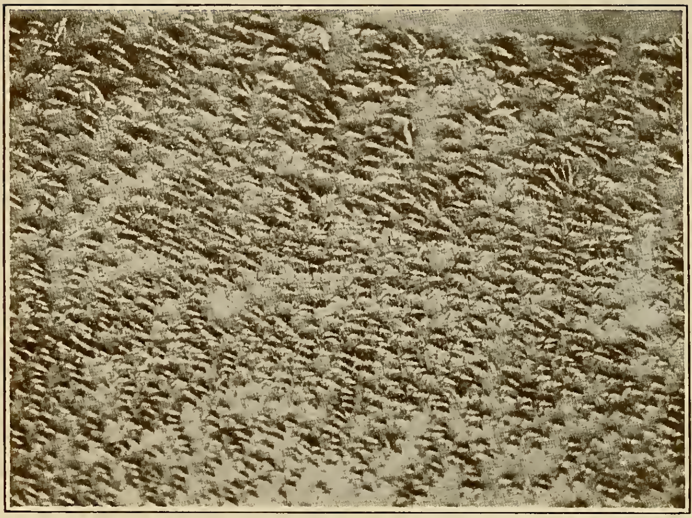
In the early stages the little locusts progressed by hopping. They appeared to hop at random and to come down with their heads in any direction whatever; yet on the whole there was a steady drift of the seething, skipping mass—like sand fleas on hot sand—in one direction. And the smaller they were the better could they cling to and climb slippery surfaces. The very small ones could climb up inside an inverted tumbler. The larger they grew the less they hopped and the less could they climb. The great destructive armies of saltonas in the last stage never employed hopping as a method of progress, and they could not climb smooth surfaces well. Even top-boots, overhanging as they did somewhat at the ankle, baffled the big saltonas. But they could, to some extent, climb barriers at the cracks where the tin strips overlapped, and if one in a thousand succeeded that was enough for devastation on the other side.

THE EVOLUTION OF THE BABY LOCUST INTO THE SALTONA OR "HOPPER" STAGE.

The general history of the development of the locust is one of progress from stage to stage. In each stage there is growth and then a change of skin, a further and more abrupt increase in size at the change, and six changes in all. Locusts are called "saltonas" or "hoppers" in English, until the last stage, when they come out with wings as mature locusts, called "voladoras" (flyers). The wing pads in the earlier changes seem to be abortive and quite useless. As "saltonas" the little locusts progress by hopping, and can climb almost anything. This is the period of greatest destruction.

Of course, no barriers availed when the locusts reached the voladora stage. One had to be content with having had some fruit and vegetables up till then, and one hoped that they would soon fly away. In all stages, too, including the last or voladora stage, these new locusts were singularly oily or juicy as compared with the old ones that came to lay, and this juiciness made the attempts to burn the "mosquito" or "saltona" markedly unsuccessful. In all stages they roosted above the ground at night, but on hot days they climbed up posts and even up grass stalks to get away from the baking earth.

On November 27 they began to hatch out. By December 24 they were several stages on and were one-half to three-fourths inch long. About January 9 I began to notice the change to the last stage of saltona, which was 1½ inches long. Change to the voladora stage began about January 16, and about January 25 the voladoras predominated in numbers. By February 2 voladoras predominated greatly, and the remaining



THE MARCH OF THE "SALTONAS."

The last stage of the locust before it begins to fly is the worst. The plague of them becomes indescribable. These big 1½-inch "hoppers" cover the whole country and march in huge armies along the roads or across the paddocks. With their big, impudent heads and caterpillarlike bodies, they increase the loathing one had for them from the beginning. In all fresh stages locusts are oily or rather juicy, so that attempts to burn them are markedly unsuccessful. As "saltonas" they eat voraciously. They cover persons attacking them, they cover the sides of buildings, and they cover themselves in heaps when they are not all marching on together.

A CORN FIELD BEFORE A LOCUST INVASION.

Argentina is now one of the great corn-producing countries of the world. The exports total more than that of any other country, and each year sees an increase in acreage devoted to that grain. Fortunately, the swarms of locusts do not come every year, nor do they attack the same areas each time that they do come. Once started on their devastations, however, they leave scarcely any green thing alive.

saltonas were meditating the final change and were not eating much. The latter part of February gave a story of flights going away to the northwest—it is believed they go northward round by the west—and of other flights, also on the move, alighting in passing. On March 18 there were only a few here and there, like grasshoppers in England, and the last of this terrible plague was a passing cloud, high in the air, on March 23, drifting in their curious way at 45° or so to the wind.

Beyond temporarily protecting the garden and fruit trees, so as to put off the evil day of destitution as long as possible, i. e., until the locusts reached the voladora stage, the fight with them was quite useless in such a big invasion as this. Had we killed none, more would have died of starvation, that was all. In the earlier stages we could burn the locusts in some places, viz, in the garden, on the roads, and in such paddocks as had degenerated back to the wiry and inflammable puna grass. In green alfalfa they had too much cover.

SALTONAS EATING MAIZE (CORN) COBS.

Locusts seem to spend all their energy in eating, but they remain only about three months in one place, from the time of hatching out of the eggs to the final disappearance, so that their destructive presence is not everlasting. The owners of the large estancias in Argentina take this fact into consideration, and plant accordingly. Not all their fields are put to corn, or wheat, or alfalfa. Late and early crops are combined, and in this way an invasion can be forestalled. As the country becomes more thickly settled, with greater harmony of action among neighbors, and scientific support from the Government, the locust plague will die out or become at most a harmless although annoying pest at harvest time.

About January 9 began the worst period of the plague, when large numbers of the saltonas had reached, and daily vaster numbers were reaching, their last and biggest stage before the final change into voladoras. It was now no longer a question of looking for mangas (swarms); these big 1½-inch hoppers covered the whole country and marched in huge armies along the roads or across them from paddock to paddock. With their big impudent heads, ugly coloring, and caterpillarlike bodies, they were well adapted by their appearance to heighten the loathing which we felt for them. They occupied our mental vision; we saw them in dreams; I see them still. We could now make them walk into pits, guiding them by barriers, but it made no difference. Flocks of hawks and eagles, seen at no other time, came literally by the hundreds and devoured, but it made no difference. They ate each other, they got drowned in drinking troughs and wells, we trod on them and beat them down with flails, they died for lack of foods or attacked by parasites, but it made no difference. If you stopped for a moment anywhere out of doors you were soon covered with them—innumerable as the sands of the sea.

Alfalfa was eaten to the ground, the leaves, bark, and even the tender wood of the willow trees and acacias was devoured; they even attacked clothes. I saw one begin to eat, alive, a brother saltona that was changing its skin and therefore helpless, but I could not feel compassion for him. These new voladoras soon covered the ground and rose in short flights as one walked. They seemed anxious to eat, but there was little left for them. All February voladoras went away and it is believed that they work round to the north and make for the Gran Chaco or other empty lands and to winter there.

These locusts did not eat paraiso trees nor the tall, native canes, nor onions, cucumbers, sweet melons, watermelons, pumpkins, or certain flowers, nor were they very "keen" on the eucalyptus, unless ravenously hungry. In the invasion witnessed the locusts reached their full devouring power too late to eat the wheat and linseed, but where the crop is maize the result is ruinous. By careful planting with regard to an invasion hay in abundance may be saved, so that cattle are continuously fed, and once the swarms have passed, alfalfa, which they eat to the ground, soon springs up again. Nor does an invasion take place every year or in the same severity over the same territory each year. And one thing is certain, that as cultivation increases and the study of the locust becomes wider spread these plagues will be less frequent, as in fact is the hopeful result right now.

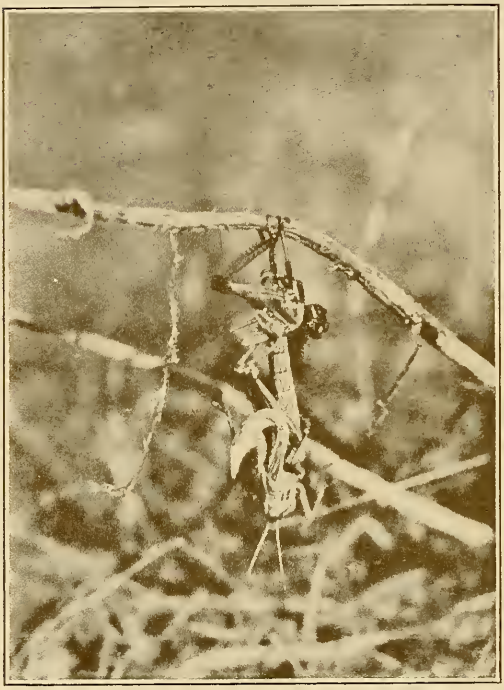
A CORN FIELD AFTER A LOCUST INVASION.

Locusts during the "saltona" stage seem to exist only to eat. They can destroy a field of corn while marching over it. They sometimes eat each other, and at times, when they reach a district offering but small provender, they die of starvation as "saltonas," or when changed into "voladoras" they pérish through weakness or inability to fly away to the unknown regions in the north, from which the next swarm is supposed to come.

The locust has been a pest for thousands of years. It is mentioned in the Bible, although the particular kind sent to plague those early agriculturists may not be positively known. Every new country, or rather every country in which agriculture is conducted not far from desert or unoccupied lands, has been subjected to invasions of locusts, which carry destruction to the crops and all other green things. There are two well-defined plague locusts in India. In Africa locusts have been known from the beginning of history, and in south Africa great efforts are being made by progressive governments to overcome their ravages. In Cyprus the British authorities have practically succeeded in accomplishing their destruction. In Australia great attention has been paid to the insect and many active steps taken to rid the country of it.

In the United States and Canada locusts have seemed at first to render some localities useless for cultivation, but modern research and the closer habitation of the country have reduced the swarms to a considerable degree. In the United States, Central and Western, the plague locusts have done the most damage, the area involved during the ravages first recorded being 2,000,000 square miles. That plague started in 1873 and increased in intensity in the three following years, stretching from Canada almost through Texas, but culminating in intensity in Kansas, Missouri, Minnesota, and all those rich lands on the Missouri, Mississippi, and Platte Rivers.

It is not the same locust in all countries which causes the damage. Their habits are not unlike, but they bear different names and have distinguishing characteristics. The Rocky Mountain locust, *Caloptenus spretus* Thomas, is the name of the pest that devastated the country in 1873, 1874, 1875, and 1876; this, or two others related to it, was the insect found in Canada; still other relatives have spread by swarms in other years, but their activities have not been so disastrous. In Europe there are several related kinds. In India the wandering locust, *Acridium (Schistocerca) perigrinum*, is the most widespread, but there are others. In south Africa the red-winged locust, *Cyrtacanthacris septemfasciata*, and the brown locust, *Pachytylus sulcicollis*, do the most damage. In South America the large, migratory destructive locust is the *Schistocerca paranensis*.



CHANGE TO LAST, THAT IS, TO "VOLADORA" STAGE, IN THE LOCUST CYCLE.

The change from "saltona" to "voladora" is of itself interesting. The voladora emerges with its wings damp and crumpled and its long hind legs limp and useless. So, before it was quite free, it bends up and gets hold of the twig or grass stem with its front legs and hangs there until its wings are expanded and hind legs strengthened. It is some days before it can fly far, and it is a much softer insect than the old voladora that had come down from the north to lay eggs. It is of the same size, however. The new voladoras cover the ground, but rise in short flights when disturbed. They are anxious to eat, but can find little on which to feed.

Locusts are not grasshoppers, although they usually have the hopping habit in one stage of their development. Locusts are gregarious, swarming together when they emerge from the eggs, which are laid in the ground. Grasshoppers, on the other hand, are never gregarious; they usually go about in pairs, depositing their eggs in rows on twigs of plants or on grass stalks. The so-called 17-year-old locust is not a locust at all, although the one resembles the other in certain superficial characteristics; it is the *cicada septemdecim*, a cicada which sings its love song and dies shortly after. That cicada (the spurious locust) lays eggs on the trees, and when they hatch the larvæ crawl into the ground for a very long period of dormancy; the mature insect is only moderately destructive.

NEW VOLADORA DRYING WINGS AND LEGS.

As the locust that has come to maturity in Argentina reaches maturity as a voladora, the last stage in its life history is completed. It then prepares for its own flight toward the north, from which direction a subsequent generation appears at another invasion. The new voladora defies barriers which are insurmountable to the "saltona." The voladoras can fly, and after clumsily experimenting with their new method of locomotion for a few days, they form swarms similar to the original ones, and vanish by degrees.

Wherever active and persistent work aimed at the destruction of the migrating locust is carried out the result is sure to be successful. Such work aids the farmer, and it is increased in effectiveness as a country becomes better occupied, better cultivated, and as cooperation among agriculturists led by government initiative is more powerful. In several countries these plagues are to-day but little feared; in Europe they are almost forgotten. In the United States an entomological commission was appointed in 1877, and its reports have accomplished much in spreading information on the subject, while its practical work has been very satisfactory. The outcome of this commission was the Bureau of Entomology in the United States Department of Agriculture. Other nations have been equally thorough.

Nor has the Government of the Argentine Republic been idle. On the contrary, it has shown itself most vitally concerned in the welfare of its people, and the activities of the Argentine department of agriculture in this regard have been widely recognized. Early in 1897, after a year of extensive ravages of the locust, the locust investigation commission was formed, and the commercial bodies took up a proposal that they should help the Government in framing suitable laws for the destruction of the pest. Prof. Lawrence Bruner, entomologist to the State of Kansas, was engaged to make a report, and this was published in 1898. Since then strong efforts have been and are continuously being made by private associations and by the national and State governments to eradicate the pest. A regular publication, devoted practically altogether to the locust question, is issued, records of particular movements are kept, and instruction with other aid is freely given where and whenever necessary. Prizes are offered for perfected methods, whether old or new, to destroy the insects in any stage, and success has followed their labors.

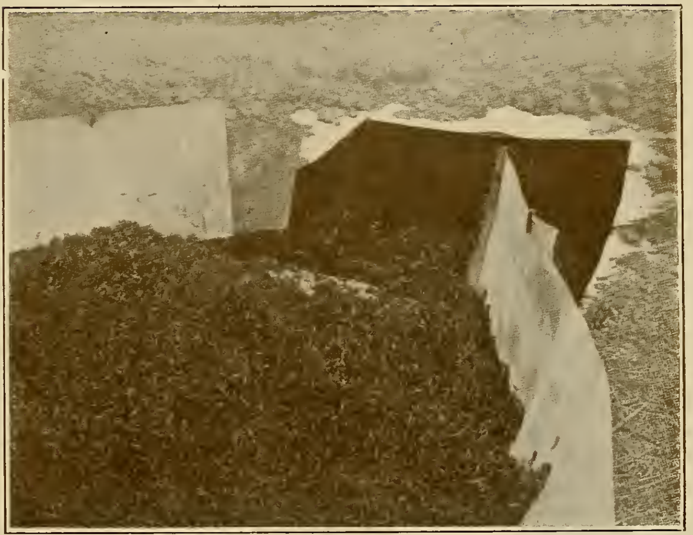
BURNING YOUNG LOCUSTS.

In the early or so-called mosquito stage one of the most serviceable plans of attack upon the locusts is to burn them in some places, like the garden, on the roads, and in the paddocks where inflammable grass was left. In green alfalfa too much cover was offered. The method adopted, after finding a swarm (manga) by noticing the brown appearance indicating where they have roosted, is to erect to leeward of them a barrier toward which they are driven, setting fire to them, whenever possible, by naphtha machines invented for the purpose. Oil-saturated material of various kinds is also applied to the heaps, as shown in the illustration, and the flames wither them up, but the locusts are so juicy that the top layer protects those underneath, so that not all can be killed in this way. As the camp becomes dry, this burning method must be abandoned.

After all, the fear of locusts is an unnecessary one and the distressing tales of the ruin caused by them are in many instances exaggerated. To be sure the figures of the amount of destruction left in their wake are appalling, when taken in the bulk; $200,000,000 worth of damage, so it was estimated, was done by the plague of 1873–1876 in the United States. Other amounts of relatively equal

SCOOPING UP SALTONAS WITH THE CARCARAÑÁ.

Another method of destruction, which is of value in later stages, is to use a big iron scoop, called a carcarañá, a name derived from the town in which it was first devised. This is about 10 feet long, and is dragged by means of a rope at each end attached to the saddle rings of two horsemen, who keep level with one another and sweep the manga (swarm) at a canter into pits. In the illustration this scoop is somewhat sunk in the alfalfa and is not well seen.



DRIVING SALTONAS INTO PITS.

Pits 12 feet long by 3 feet wide and 4 feet deep are dug, and the scoop (illustrated in the preceding picture) is emptied into them. When full, the pits are covered with earth. While filling, projecting sheets of tin keep the locusts in, or a boy may be employed to beat them down with a stick.

Another way, especially where there is no danger from prairie fire, is to erect barriers converging to a pit, whose borders are guarded by overhanging tin sheets. A swarm is then driven into these by men with naphtha machines, working down the wind.

Numerous different ways are practiced, depending upon the individual experience and cleverness in meeting such emergencies. The Government aids largely in all suggestions that have value, and itself is instrumental in attacking the problem of destruction in every manner science may propose.

magnitude might be quoted, without denial. Yet, ignoring the possibility of miscalculation, even granting the correctness of such figures, they are not approached by present plagues in North America. In South America startling losses have been proved, but each year the total grows less, or rather a steady decline in actual loss can be documented. Moreover, it is not every year that locusts visit the same place—often returning in cycles that leave a gap of bounteous crops in between—nor do they always attack all of one neighborhood. In fact, the charts issued by the Argentine Government show that the areas covered are of comparatively small dimensions. The fatalistic idea of "a visitation of Providence" has disappeared; the ignorance and indifference once displayed by early settlers have been overcome, while the work of both public and private agencies has been intensified.

It is not improbable that within a few years the swarms of locusts in Argentina will be a rare occurrence, as the country becomes more thickly populated and the means of combatting them more generally employed. They will no longer be a terror to the agriculturist or an interesting phenomenon to the tourist. This sketch of the author's personal experience is therefore repeated in the BULLETIN, so that, in case his charmingly told story is not on hand in the original, it may be used sometime hereafter when data based upon such accurate observation as that of Prof. Larden are inaccessible. The BULLETIN takes pleasure also in thanking the author and publishers for their cordially extended permission to reproduce the photographs and that part of the text associated with them.

ALL-RAIL ROUTE BETWEEN MONTEVIDEO AND RIO DE JANEIRO

THE distance by water from Rio de Janeiro, the capital of the Republic of Brazil, to Montevideo, the capital of the Republic of Uruguay, is, according to the usual hydrographic charts, 1,056 nautical miles. The time taken in the trip is, as a rule, three days. This implies a rather direct passage of the vessel—under steam—from one port to the other, and in fact such is the route ordinarily traversed, although allowance is made for a stop in the harbor of Santos, 212 nautical miles south of Rio.

Should the traveler wish to hug the shore more closely and to enjoy the charms of unfrequented places, he can take a coastwise steamer which makes stops for cargoes and passengers about once a day at little harbors hidden below the hills, where history was once made, and he feels constantly that he is journeying along some busy but forgotten shore of Italy. The scenery is so beautiful, the air so soft, the people so kindly natured and contented, that the 8 or 10 days demanded by the slower steamer slip by without notice. This coasting trip can be confidently recommended to anyone not in a hurry, and it is a sin to be in a hurry under the lovely skies of south Brazil.

But pleasurable sightseeing is not always the guiding principle in South American travel. There are other reasons, equally as weighty, which influence movement from place to place. Economic, commercial, and strategic reasons contribute more, undoubtedly, to the development of a country than do the esthetic. If the traveler of a few years ago asked, as he usually did, why he could not go between the two capitals overland, and what might happen if he tried to do so, the answer would almost surely be: There is no beaten trail; overland it is a trip of nearly 2,000 miles, scarcely one-third of which is covered by the railway; much of the four Brazilian States through which the road must pass, Sao Paulo, Parana, Santa Catharina, and Rio Grande do Sul, is woods and wilderness; there are few towns, fewer settlements, while even the colonists are scattered; it would take weeks of rough travel to accomplish the end, and the experiences could be compared only to a roughing-it expedition across the Panhandle of Texas into Oklahoma. Ten years ago the substance of this answer was true.

To-day, or rather just a year ago to-day, a great change was effected, and the contrast between the popular, well-arranged, and expeditious waterway, on the one hand, and the primitive, pioneer-like, uncharted pathfinding across country, on the other, was forever broken. Or, to be precise, the through railway connection from Rio de Janeiro to Montevideo, a distance of 1,966 miles (3,165 kilometers), was established during the latter half of 1910.

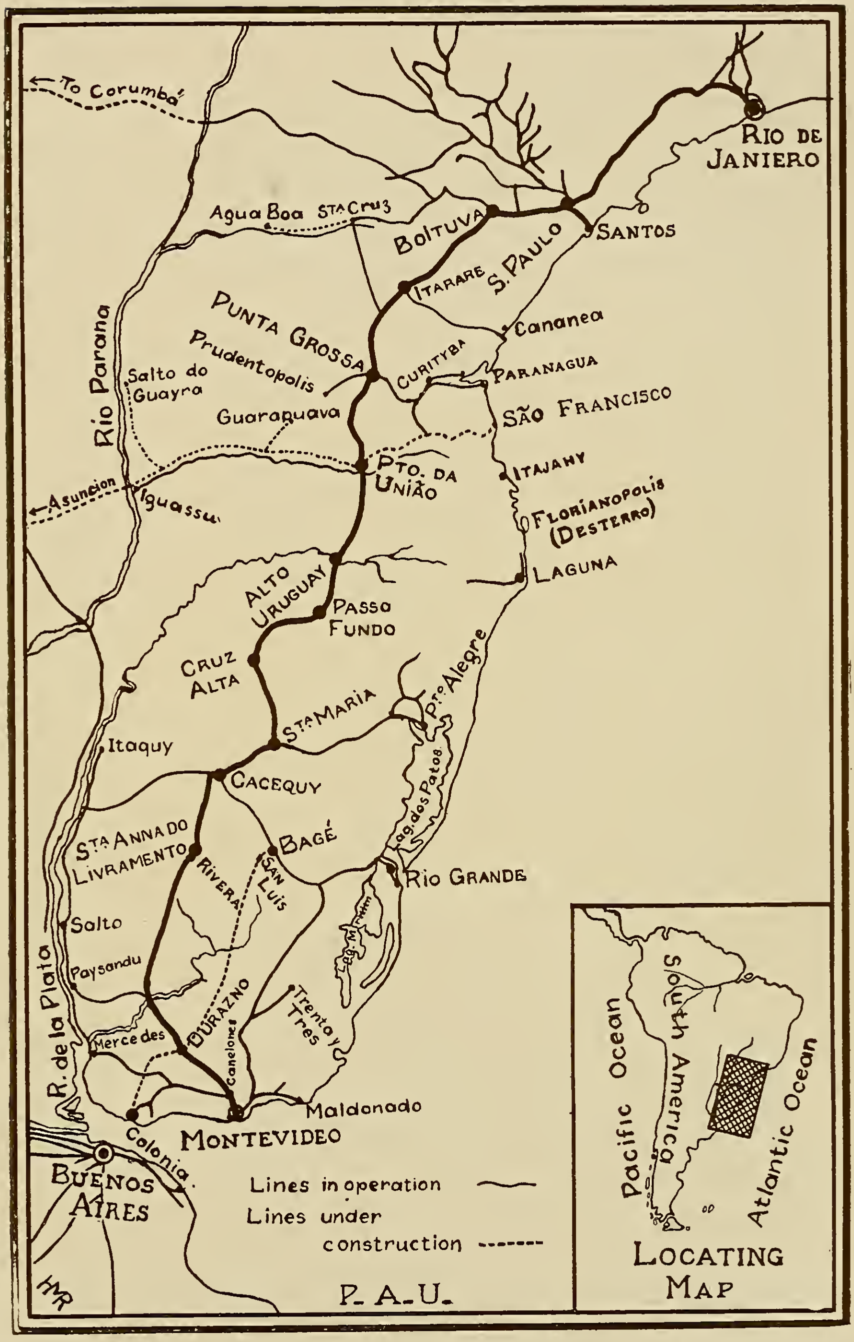
The BULLETIN has been favored by seeing a report made by Mr. John Sterrett Gittings, jr., with data collected during a trip made by him in company with Maj. William C. Brown, Third Cavalry, United States Army, and it wishes to acknowledge its indebtedness to that report for many of the facts and figures included in this article. The document is a remarkably timely compilation of just that kind of information which is extremely difficult to secure when it is of greatest value.

THE STATION OF THE CENTRAL RAILWAY, MONTEVIDEO, URUGUAY.

All trains for the interior of Uruguay leave from this station, a substantial, commodious structure, modern and practical in its appointments.

We left Montevideo on December 20, 1910, by the all-rail route to Rio de Janeiro, which has recently been opened by the construction and linking together of several railways, and reached our destination on January 3, 1911. The time actually spent in travel was 112 hours, and the reason for the long lapse between the start and the arrival can be found in two delays—one enforced, at Santa Maria, and one voluntary, at Sao Paulo. It must be remembered also that the traveling, except for the first night in Uruguay and the last night before reaching Sao Paulo, was done in the daytime. Sleeping cars are not yet (December, 1910) in use north of Rio Negro, Uruguay, or south of Ponta Grossa, Parana.

The companies which form the all-rail route between the capital cities of Uruguay and Brazil, and the districts in which they operate, are: (1) The Uruguay Central—



ALL RAIL ROUTE BETWEEN MONTEVIDEO AND RIO DE JANEIRO,

The route recently opened is indicated by the heavy black lines. Much of the beautiful and fertile country along the way is but sparsely inhabited, but when the land is settled it will be one of the most productive areas in South America. The entire distance from one capital to the other is 1,966 miles (3,165 kilometers), and from Sao Paulo to the frontier of Uruguay at Santa Anna do Livramento (Rivera), the line is for the first time in operation. It must be noted that the plan of railway expansion in South Brazil is to extend the rails westward by the Falls of Iguassu to Asuncion in Paraguay, the eastern terminus to be beyond União to São Francisco on the Atlantic Ocean.

British capital and officials—through Uruguay from Montevideo to Rivera, on the Brazilian frontier; (2) the Viaçao Ferrea do Rio Grande do Sul—Belgian and European capital, with Belgian and French officials—in the (Brazilian) State of Rio Grande do Sul; (3) the Sao Paulo-Rio Grande Railway—Brazilian and foreign capital, with native and foreign officials—in the States of Santa Catharina and Parana; (4) the Sorocabana Railway, also combined capital and officials, in the State of Sao Paulo; (5) the Brazil Central, the property of the Brazilian Government, in the States of Sao Paulo and Rio de Janeiro.

The accompanying diagram shows the itinerary of the route, with details existing at the time this trip was made, but which will, of course, be modified and improved as soon as circumstances permit.

All-rail route between Montevideo, Uruguay, and Rio de Janeiro, Brazil.

Sections.	Railway.	Distance and number of intermediate stations.	Time.	Fare.	Service.
Montevideo to Rivera (frontier).	Uruguay Central, 4 feet 8½ inches, single track.	567 kilometers (352 miles), 37 stations.	21 hours...	$16.10 gold	3 times a week.
Rivera (Uruguay) or, as the Brazilian town is called, Santa Anna do Livramento, to Santa Maria (Rio Grande do Sul).	Viação do Rio Grande do Sul, 1 meter gauge, single track.	280 kilometers (174 miles), 14 stations.	10 hours 10 minutes.	21$800 [1]....	Do.
Santa Maria to Passo Fundo.	......do................	356 kilometers (221 miles), 15 stations.	12 hours 55 minutes.	37$500 [1]....	Do.
Passo Fundo to Alto Uruguay.	......do................	179 kilometers (111 miles), 10 stations.	11 hours 35 minutes.	15$000 [1]....	Once a week.
Alto Uruguay to União da Victoria.	Sao Paulo-Rio Grande, 1-meter gauge, single track.	363 kilometers (226 miles), 12 stations.	13 hours 54 minutes.	29$200 [1]....	3 times a week.
Uniao da Victoria to Ponta Grossa.	......do................	263 kilometers (163 miles), 13 stations.	11 hours 10 minutes.	21$800 [1]....	Do.
Ponta Grossa to Itarare.	......do................	252 kilometers (157 miles), 10 stations.	8 hours 5 minutes.	....	Do.
Itarare to Sao Paulo...	Sorocabana, 1-meter gauge, single track.	416 kilometers (258 miles), 36 stations.	13 hours 10 minutes.	45$000 [1]....	Through train.
Sao Paulo to Rio de Janeiro.	Central of Brazil, 1½-meter gauge, single track.	489 kilometers (304 miles), 71 stations.	9 hours 40 minutes.	29$300 [1]....	Both day and night trains.

[1] 1$000=1 milreis=$0.30 gold.

The general physical characteristics of the region traversed are a rolling pasture country as far north as Passo Fundo, pine forest to Ponta Grossa and beyond, and upland agricultural and pastoral lands in the State of Sao Paulo, where the plateau extends practically from Santa Maria all the way to Rio de Janeiro. There is no striking scenery, the possible exceptions being the ascent of the serra (hill or mountain) to reach the plateau after leaving Santa Maria, the descent on Uniao in the Iguassu River Valley, and the descent on Rio de Janeiro from Barra, a station just at the edge of the plateau. These spots are beautiful.

The entire district is scantily populated. In the pine forests, where man has but blazed his way, there are scarcely any inhabitants, except a few workmen and colonists. The villages contain between 500 and 5,000 souls, and the two largest, Santa Maria and Ponta Grossa, about 15,000 each. The census of the twin frontier towns of Rivera and Santa Anna do Livramento together is about the same number. Outside of the big terminal cities and Sao Paulo, the towns are similar in appearance.

Perhaps it will be well, nevertheless, to start at the beginning, and to go over the entire region traversed by this new route, and thereby to examine the various features encountered along the way, analyzing

A SHEEPFOLD IN URUGUAY.

The sheep represented in the illustration are pure-bred French Merinos of the Rambouillet breed. This is one of the most popular of all the Merino breeds, and fancy prices are paid in Uruguay and Argentina for the best of the imported stock. It is the custom to cross the Rambouillet rams on criollo stock, descendants of the British long-wool breeds; the get of this cross produces a wool with fiber longer than the Merino and finer and more highly imbricated than the criollo. This wool is quoted and sold in the market according to the proportion of the cross, each proportion being a different class of wool, one-half, three-eighths, or one-fourth blood, as the case may be.

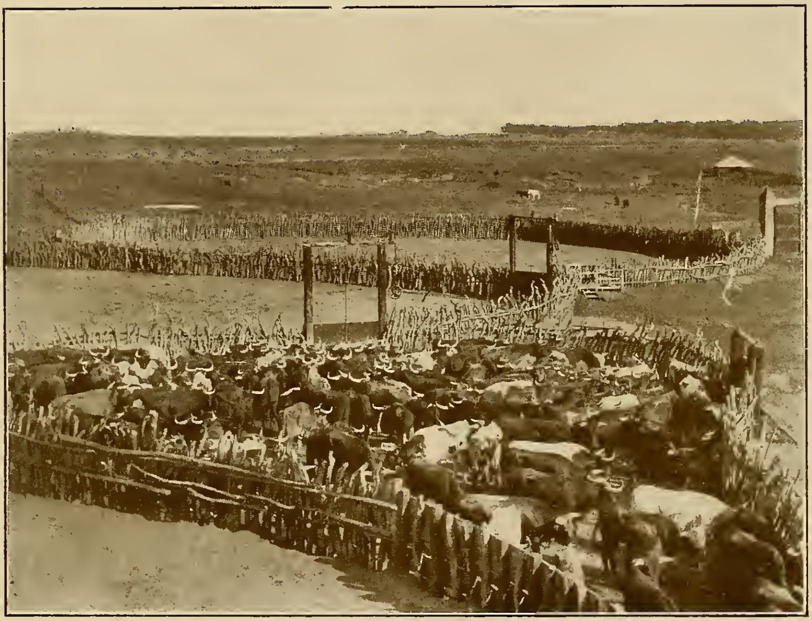
the new problems presented, and studying the older ones in the light of the important changes that have taken place, or more particularly, that will of a surety take place, as this overland highway becomes better developed and known.

From Montevideo to Rivera—Uruguay Central Railway.—We left Montevideo in the early evening, reaching Rio Negro the next morning; here the sleeping car was detached. We arrived about 6 the same evening at Rivera, the terminus of the line, which is on the Brazilian frontier, the contiguous Brazilian town being named Santa Anna do Livramento. No great engineering difficulties have presented themselves; the line of the railway is not sufficiently straight, and there would seem to be some unnecessary curves. A good-sized bridge over the Rio Negro should be noted, and there are a number of trestles and culverts, and one short tunnel. Sleeping accommodations on the train are very good, the compartment car having rooms of two or four berths each.

PLAZA AT DURAZNO, URUGUAY.

The train leaving Montevideo for the Brazilian frontier passes through Durazno, not far from Rio Negro and nearly in the center of the Republic. It is a prosperous city, the capital of the Department of the same name, and is quite typical of the well-built, progressive, and industrious towns in the interior of Uruguay.

The interior of the Oriental Republic of Uruguay, through which this railway runs, is one of the most fertile regions of temperate South America. It is a pastoral rather than an agricultural country, although the results in this direction are those of accident more than of design. The land is fruitful, and even now the crops of grains are abundant, but by no means up to the capacity of the soil to produce, but from the early occupation of this interior, the cultivation of cattle was the choice of the natives and of settlers alike. It is a pretty country, not wild and rugged, like Argentina or Chile along the slopes of the Andes, nor like the higher levels of Bolivia or Peru, or the softer but still mountainous areas of Colombia or Venezuela, but resembling the gentle hill country of Iowa or middle Virginia. It is well watered, too, offering abundant supply to the great herds of cattle roaming everywhere, and promising satisfactory irrigation to estancia and farm, wherever necessity arises to make use of it. As far as the Rio Negro, which is about halfway across the Republic, from north to south, the country is quite well settled. This Rio Negro is one of the main interior waterways of the country, and a fairly active traffic is maintained on it; steamers of moderate draft navigate it, but a growing commerce demands greater facilities. The Government has decided therefore to deepen the river so as to admit vessels of 6 feet (1.8 meters) draft, as far as the Paso de los Toros, where the railway crosses with a fine, substantial bridge.



CATTLE CORRALS IN URUGUAY.

The cattle in the picture are ready for slaughter at a *saladero* or salting plant near Montevideo. These cattle are of the ordinary Longhorn variety, with, in this case, only a slight infusion of Shorthorn blood. The improvement of Uruguayan and Argentine cattle through crossing of the best imported Shorthorn and Hereford stock is rapidly changing the ordinary type, such as is shown above.

North of the Rio Negro the country is more thinly inhabitated, but nevertheless numerous stations, estancia buildings, and other signs of cultivation attest the fact that the land is not completely virgin, nor just beginning to be opened. In this respect it differs from the interior areas of most of South America, for in Uruguay, although there is still room for many, many more home makers, the population is relatively well scattered. To be sure, this population is on a proportion of about 16 to the square mile, but the people love their country, and the later immigrants spread to the interior instead of remaining in the cities, the result being that very few square miles in the Republic can be found untouched by industry as yet. One of the reasons for the existence of the Pan American Railway, now under construction in Uruguay, is to tap and to open up this northern portion of the country; and although it should not be called a direct competitor of the Uruguayan Central, yet it will touch the Brazilian frontier just as does the Central, and be an additional stimulus to the development of that interior.

Viação Ferrea do Rio Grande do Sul.—The country traversed is rolling pasture land, the soil of a sandy nature. Except for hills and small mountains near Santa Anna and Santa Maria the line runs through a wide valley, following the ridges and higher places. There are some swamps, and floods are noted during the rainy season, making necessary many embankments and trestles. These floods cause trouble. The line is being made more permanent, although the stations, bridges, and water tanks are new and excellent. There is dining-car service which might be improved, but no sleeping cars, as night trains do not run yet. The railway contemplates running sleeping cars by next April, offering good service to Montevideo, and, in fact, working gradually, the whole system is to be brought up to a higher standard, by stone ballast, new locomotives and rolling stock, and by heavier rails. The company operating in the State of Rio Grande do Sul is active and wide awake, knows what the State needs, and tries to provide it; the management appears fully competent to give Rio Grande do Sul good railway communication, even ahead, perhaps, of what the population and commerce warrant.

BRANDING CATTLE IN URUGUAY.

Uruguay has its cowboys, *gauchos,* as they are called in all parts of southern South America, and they do not differ in essentials from the cowboys of Texas or the vaqueros of Mexico. They also use the lasso for roping cattle. Many of their peculiarities have been made the subject of song and story, while their fighting qualities supplied the backbone of many a struggle for liberty.

The first portion of this railway, from Santa Anna de Libramento to Santa Maria, is a daylight run, taking 10 hours, all the distance being, as the notes indicate, but very recently opened. It is a cattle country, but may be brought into agriculture when the land is needed. Hitherto travel across the State of Rio Grande do Sul to the Uruguayan frontier has been by slow diligencia (stage coach) either from near Santa Maria or Bage, a brisk little town to the southeast, but with this new and more rapid outlet toward the south there is great promise of enlarged and active intercourse between the two Republics. The only rail connection hitherto from Brazil into Uruguay has been along the western border, by a line paralleling the Uruguay River, traveled only moderately on account of the tremendously unnecessary distance. A comparison can be given by recalling to mind the circuitous route from New Orleans to El Paso and thence to Mexico City, as against the much shorter line of to-day directly south from San Antonio.

This ground is of historic interest. Over it troops have tramped when Rio Grande was the center of a struggle for freedom, and Garibaldi won his spurs here—and his wife as well—before he reached undying fame as the liberator of Italy. As would be expected in a cattle country, however, settlements are infrequent; fences are almost unknown, trees are scarce, and the feeling of being out of the world is intensified by the emptiness of the landscape. Yet the railway is sure to bring the region to life when once its value is recognized and the really productive country is made to yield a harvest.

A MODERN RAILWAY BRIDGE IN URUGUAY.

Of the 1,472 miles of railway in the Republic of Uruguay, almost the entire mileage is standard gauge. Construction has not been difficult from an engineering point of view, although improvements are possible and are constantly being undertaken by the management. Careful attention has been given to the bridges over the numerous streams in the country, with the result that traffic is seldom interrupted on their account.

The second portion, from Santa Maria to Passo Fundo, at least as far as Cruz Alta, has been built and operated for about 10 years. It is the only line in Rio Grande do Sul which encounters engineering difficulties on account of altitudes, for it penetrates the district of the mountain system of eastern Brazil. Around Cruz Alta is a mining camp, and near by are quantities of the maté trees from which such a comfortable source of revenue is derived. But the report continues as follows:

After leaving Santa Maria it is a steep, upgrade climb to reach the serra, and there are plenty of curves. The first 9 miles account for 1,140 feet in altitude, and the train climbs well. After reaching the plateau the railway follows the ridge of the watershed between the Atlantic Ocean and the River Plate Basin. The line is crooked, but a survey has been made to reduce the distance by about 14 kilometers (not quite 9 miles), cutting it down 12 per cent, but it has not been acted upon as yet. Over the present line the maximum average speed, 45 kilometers (28 miles) an hour, has already been reached; to reduce the time materially much new cutting and filling would have to be done, and while every obstacle is avoided now, and therefore engineering difficulties would not be entailed, an expense would be necessitated out of proportion to the present demands of the country. The district is bare of trees, except toward the last 50 kilometers (31 miles), where timber patches exist. Timber is used for stations and sheds. Cattle are fewer than farther south, and there are hardly any fences. No delays at stations or in taking water—all very prompt. Service quite sufficient. Trip not so dusty, but smoky. Some dining-car accommodations, but poor.

THE ONLY RAILWAY TUNNEL IN URUGUAY.

Not far north of the passage of the Rio Negro, on the direct line of the Uruguay Central Railway between Montevideo and Rivera on the Brazilian frontier, is a relatively short tunnel under the Tambores range of mountains, or hills, as they should more properly be called. The tunnel is more for the purpose of preventing excessive curves than of avoiding extraordinary engineering difficulties.

From Passo Fundo to Alto Uruguay.—This section of the railway is the latest south of the Uruguay River; it runs through a hilly rolling country, of primeval forests. A difficult line to locate, especially the long descent to the Uruguay. The right of way follows the watershed, as before, but enters the drainage basin west of that watershed as it approaches the Uruguay, because this river flows toward the southwest, and its union with the Parana forms the River Plate.

The country is very thinly populated, as the colonists of the State of Rio Grande do Sul have not penetrated so far toward the northwest. The slope of the sierra (mountain range) has been the principal field of colonization, and only where they settled has the belt of covering forest been encroached upon. These colonists were mostly Germans who came to Brazil as early as 1824, or Italians of a later date. They found a rich and productive soil, more than sufficient for their wants, and occupied as agriculturists much of the land between Porto Alegre, at the head of the Lagoa dos Patos, and the eastern slope of the range, but there was no inducement for them to climb farther inland. The influence of German settlement upon the State of Rio Grande and of Parana is a remarkable story by itself, but this new railway passes just outside that sphere of influence. East and west across the State a line has existed for some time; in the area contiguous to Porto Alegre, its capital, a railway taps the colonies toward the north, and it has been proposed to extend this farther northward with the intention ultimately to connect with the southward extension from Sao Paulo. But the present solution of interior transportation—along the route under discussion—prevailed, although it is highly probable that some day this project will be realized by connecting Porto Alegre directly with Passo Fundo, or Alto Uruguay, the end of the fourth section of the trip, as our travelers made it.

(Courtesy of Viacao Ferrea do Rio Grande do Sul.)

RAILWAY STATION IN RIO GRANDE DO SUL.

Along the entire railway, between the frontier of Brazil and Sao Paulo, the various railway companies have constructed substantial and permanent buildings as part of their equipment. This policy is a wise one, for as the country becomes settled travel and the resulting use of stations will be encouraged thereby.

The whole line is roughly laid, for it is still in course of construction and amounts really to a logging road at present. The train progressed slowly, much slower than yesterday. New stations are being built, substantial ones, too, as the Government insists on that feature. Trains run only once a week beyond Capo-ere (halfway), where lunch was obtained. No dining car runs on this section.

There are no great troubles from rains or washouts, but engineering difficulties are greater than on any section yet traversed. The last 50 kilometers (31 miles) are most mountainous. The track was laid at the rate of 1 kilometer (0.62137 mile) a day, and general cutting, filling, and grading took about two years. There are five temporary timber viaducts, three of them 60 feet high, but they are all being replaced by permanent concrete and metallic structures.

At Alto Uruguay, there is a great cut about 2 kilometers (1.242 miles) long to approach the bridge, which at present is only temporary, taking only 100 days to build, but the permanent bridge, resting on solid stone piers, will have six spans of 205 feet each, the entire bridge to be 1,401 feet long. The river (Uruguay) rises in freshets 12 meters (almost 40 feet). The scenery is all pine forest, very pretty in last 50 kilometers (31 miles). Here we observed flat-topped pine (Parana pine) for the first time. The country is just opening to civilization.

(Courtesy of La Razon, Montevideo.)

THE VANGUARD OF CIVILIZATION.

The State of Santa Catharina, between Rio Grande do Sul and Parana, is one of the most attractive and fertile in Brazil, but difficulty of access to the interior has hitherto retarded its development. Along the coast many settlements have been made and profitable industries established, but the interior has had to wait for the railway. Now that communication north and south is assured rapid changes are to be expected, and the State must soon become encouragingly populated.

As the (Alto) Uruguay River is crossed the State of Santa Catharina is entered. This is one of the smaller States of the Brazilian Republic and has become famous as the site of the idyllic German settlement of Blumenau, not far from the coast. That colony was founded in 1850 by a cultured and wide-minded German, Dr. Blumenau, who gave to it all his energy and ambition and whom the Government never ceased to support and honor. On the coast also are the capital, Desterro or Florianopolis, and the port of Sao Francisco, one of the best natural harbors south of Santos, which, although obstructed somewhat by a bar at the river's mouth, is destined to become, on the removal of this bar, and especially when the Sao Paulo-Rio Grande Railway completes its branch system from there westward across the State to the Iguassu River, one of the most important in Brazil.

Practically all the population and the energy of the State, however, has been concentrated in this coastal zone. Tobacco, corn, and sugar are cultivated here, maté is gathered in abundance, and coal has been found, but not developed to great commercial value. Nevertheless a so-called coal railway along the the Tubarao Valley in the southern part of the State, from the port of Laguna, has for years been operated and boasts of the Larangeiras Viaduct, one of the greatest engineering works in South America. The interior of the State is, however, almost virgin territory. Cattle are bred to some extent, and opportunities for colonists have for years been open, but little migration has found its way thither on account of lack of transportation facilities. Now all this is changing rapidly, and a new, rich, healthful, and ambition-provoking region is made accessible to the world by this north and south railway.

(Courtesy of La Razon. Montevideo.)

THE RIO DO PEIXE, IN SANTA CATHARINA.

The railway—Sao Paulo and Rio Grande—follows the Fish River, as the Portuguese name signifies in English, along the east and west watershed. The roadbed is good, the country picturesque, and the altitude is high enough to insure an agreeable climate. This region is heavily wooded, and there is practically no population.

Alto Uruguay to União.—Still on the Sao Paulo and Rio Grande Railway. After leaving Alto Uruguay, the train follows the Rio do Peixe to Sao Joao, on the watershed near the source of the Peixe. This portion of the line—the newest link of the Sao Paulo-Rio Grande—is the best piece of roadbed south of Mayrink. It is well laid, the rails are sufficiently heavy for the rolling stock, and there is stone ballast.

This part is the work of American engineers. The line still needs strengthening and grading, but as it is it compares favorably with older roads in the country. After Sao Joao the line is not so good. It descends over a winding roadbed of some 3 per cent grade, with no stone ballast, and trains must therefore run slower, losing the benefit of the speed made earlier. There are no dining cars; the engines burn pine-knot fuel. All the country along the Peixe River is heavily wooded and the scenery resembles that of the Delaware Water Gap. Later the pine belt is reached again, and the descent from the height of Sao Joao to the level of the Iguassu River shows miles of mountains covered with very thick pine. There is practically no population except railway employees.

União, Porto da União, União da Victoria, as the town is variously called, promises to be a very important point in south Brazil. There the junction with the projected railway from the coast at Sao Francisco westward into the Republic of Paraguay will be made, and there the present railway, the Sao Paulo and Rio Grande, passes into the State of Parana. This is one of the smaller States of the Republic and one of the younger also, for it was separated from Sao Paulo in 1853. It has been called the most beautiful spot in south Brazil, and in some ways acquits itself well of the compliment, although where so much beauty exists as in Brazil it is impossible to select any particular location as superior to all the rest. No one can deny the appropriateness of the praise, however, if the comparison be omitted.

Parana has one physical peculiarity quite as remarkable as its beauty. The great divide separating the flow of waters eastward toward the Atlantic Ocean from that toward the west and into the Parana Basin, comes astonishingly close to the sea. Only a few miles from the coast, and at an elevation of perhaps 2,500 to 3,000 feet, the westward slope begins; the Iguassu River takes its rise almost within sight of salt water, yet its stream does not enter the ocean until the mouth of the Rio de la Plata is reached, hundreds of miles away. This eastern slope has been occupied for generations, partly by the descendants of the original Portuguese Brazilians, partly by German and Polish immigrants, who found there the same advantages open to them in Rio Grande do Sul and in Santa Catharina; but they did not press far inland, so that the vast interior of Parana has been left to the pioneers of the present day. But this new railway journey will help to give a clear idea of what splendid opportunities are from now on made available for ambitious capital.

União to Ponta Grossa.—This day's run may be summed up as follows: Line very tortuous, very sharp turns, grades 3 per cent in places, no rock ballast. All day the train zigzagged over the right of way, following the watershed through a beautiful and somewhat tropical forest region, with many vistas of heavily wooded mountains. The last 25 kilometers (nearly 16 miles) were through a green, well-watered country.

The colonists appear better off than their neighbors farther south. Patches of corn, yerba maté trees, fruit, and vines are noticeable, and the sale of milk and eggs at the stations was an indication of their farming. There were also a few sawmills and other signs of lumber industry visible. Ponta Grossa has a new stone station, shops, and a hospital for railway employees, all very creditable.

At Ponta Grossa the traces of the pristine wilderness are left behind, and signs of continuous occupation are on every hand. The word "continuous" is properly used, because Parana has not always been ignored. In early days the Jesuits attempted to colonize its hinterland, and ruins of their foundations before they slipped away to the west and into Paraguay are discoverable here and there through the forests. They taught the native Indians, whose loyalty they retained when the exodus came. The interior, which they had to desert, besides the heavily wooded plateaus, is characterized by low, grassy plains, somewhat similar to the pampas of Argentina, only waiting for the industry of man to make use of them again.

Ponta Grossa, at an elevation of 947 meters (3,173 feet), is the junction with the older railway which leaves the Atlantic port of Paranagua, not far north of Sao Francisco, and climbs the mountain side, by some wonderful engineering work, to the State capital, Curityba, at an elevation of 889 meters (2,917 feet). One important branch goes southward by way of a town called Lapa, to the frontier of Santa Catharina, crossing the Iguassu River, on the right bank of which are situated some Polish colonies. An extension of the original line, from Curityba toward the west, reaches as far as Ponta Grossa, and thus places the region in overland touch with the city of Sao Paulo and the capital of the Republic, Rio de Janeiro. It has become a popular route of travel, and will undoubtedly develop rapidly, since Brazilians easily acquire the wanderlust so typical of the twentieth century. Already through connection has been established between Curityba and Sao Paulo, which implies the possibility of traveling overland between the seacoast at Paranagua and the coast again at Rio de Janiero. This route passes over the recently opened line of the Sao Paulo-Rio Grande railway.

Ponta Grossa to Itarare.—The train (express from Curityba to Sao Paulo) consisted of one baggage and mail car, one Pullman sleeper, one first-class coach, and one second-class coach, all new. The train leaves Curityba at 5 a. m., and is called the "Sul Express;" it arrives at Ponta Grossa at 11.30 a. m., and at Itarare at 8 p. m. The run to Itarare was through a very rolling pasture country, later becoming mountainous and reaching the pine belt again. Small population. The line is tortuous, with some 3 per cent grades, and no stone ballast, the red clay making the trip dusty.

Itarare to *Sao Paulo.*—At Itarare the train entered on the track of the Sorocabana Railway, and the run is made during the night, leaving Itarare shortly after 8 p. m. and arriving at Sao Paulo at 9.15 a. m. The roadbed is smoother, but not yet in the best condition as far as Boituva, but from Boituva to Sao Paulo the line is excellent. Mayrink, on this division, was reached at 7 a. m. Here is a new "hygienic" station of concrete, tiles, and glass, very clean, but very open. Complaints are made that it is too open. Mayrink is the town where railroad shops and workmen's model homes are located.

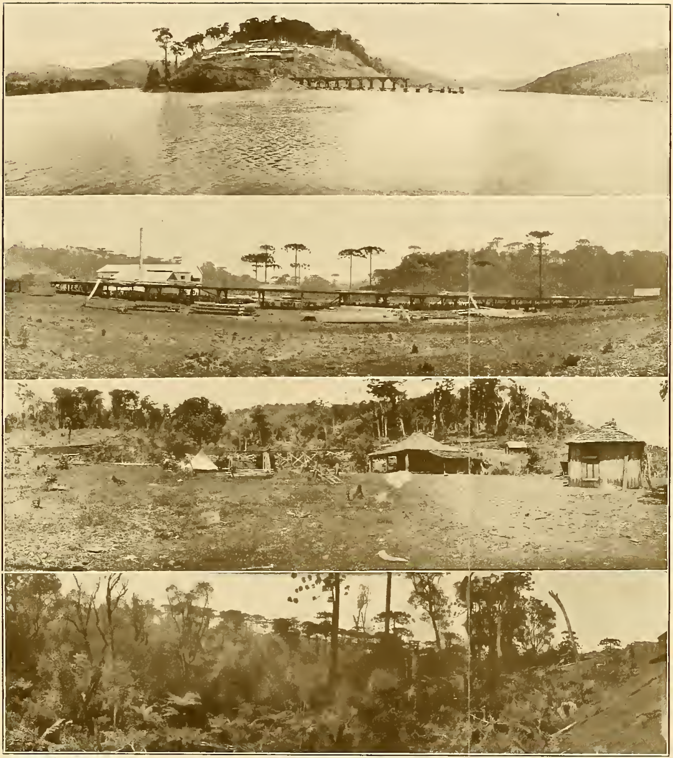
The road from Mayrink to Sao Paulo is one of the best in South America. Good heavy rails, rock ballast, no grades over 2 per cent, although the country is hilly; terra-cotta and brick stations, sheds, shelters, etc.; excellent tanks, gates, semaphores; in fact, the whole equipment. The country between Mayrink and Sao Paulo is well populated and prosperous, the last 30 kilometers (nearly 19 miles) being on a very rich plateau adjacent to the city of Sao Paulo, at an elevation of about 750 meters (close to 2,500 feet).

At Itarare is the boundary between the States of Parana and Sao Paulo; it lies on a river of the same name which flows toward the west to empty into the Paranapanema River, another great tributary of the Parana. At Boituva connection is made with the line extending farther westward into the State, but all these railways reach out into the coffee lands from which Sao Paulo has grown so rich. Thus this new southern division brings into close touch the progressive and cultivated areas of the one State with the fresher and immigrant-inviting fields of the other.

From Sao Paulo to Rio de Janeiro, 489 kilometers (304 miles), the route passes over the long-established Central Railway of Brazil, owned and operated by the Government. There is a night train equipped with sleepers, but the traveler should make the trip, for the first time, at least, by the day train, in order to enjoy the beautiful scenery on the plateau and the vistas offered at every turn as the descent down the mountain side to the coast level is made. This last portion of the all-rail route between Rio de Janeiro and Montevideo, is so well known, however, that description of it can be omitted here, but an analysis of the prospects opened by thus connecting the two capitals of these contiguous Republics is indeed worth while.

Two important phases in the development of the east coast of South America demand attention in considering the effect of this all-rail route upon the future. They may be understood as the economic and the strategic. Of course, for the immediate present no decided influence may be noticeable in any direction, because the roadbed for most of the way is new and therefore unable to bear the strain of heavy and continuous traffic as yet. Much work must be done before a thoroughly serviceable track is completed from one end to the other. But that is a problem which confronts and is practically, in the long run, successfully met by every railway built. In the United States numerous examples can be given as illustrative comparisons. Every great trunk line in the country has had the experience of constructing and then reconstructing its roadbed. These south Brazil railways seem to have made good start, nevertheless, by building at the outset solid station houses and sidings, as the report shows, so that operating routine is already facilitated in one detail, at least.

Now, as far as the economic advantages are concerned, the facts are these—the distance, 3,165 kilometers (1,966 miles), for direct shipment, is prohibitory, because from Rio to Montevideo cargoes can always be carried cheaper and as quickly by water. Many passengers will undoubtedly, as time goes on, prefer the overland route,



Courtesy of La Razon, Montevideo

SCENES IN THE INTERIOR OF SOUTH BRAZIL.

(1) The *River (Atlo) Uruguay.* Here the railway crosses the river between the States of Rio Grande do Sul and Santa Catharina. The stream is broad and has abundant water, giving promise of the splendid river it becomes later in the Republic of Uruguay. The temporary bridge was ready for use in December, 1910; the permanent structure will be 1,401 feet long, with six spans of 205 feet each. The river is subject to freshets, during which a rise of 20 to 30 feet may take place.

(2) The *station of Calmon.* Calmon is in the State of Santa Catharina, about half way between Alto Uruguay and Uniao. In this region of Brazil the famous Parana pine tree, *araucaria brasliensis*, is seen. This picturesque conifer is sure to become a source of natural wealth in Brazil, as soon as it is utilized. It rises naked from the ground to a height of 75 to 100 feet, where a series of branches spread out, curving a little upward, and ending in tufts of dark green crispy leaves.

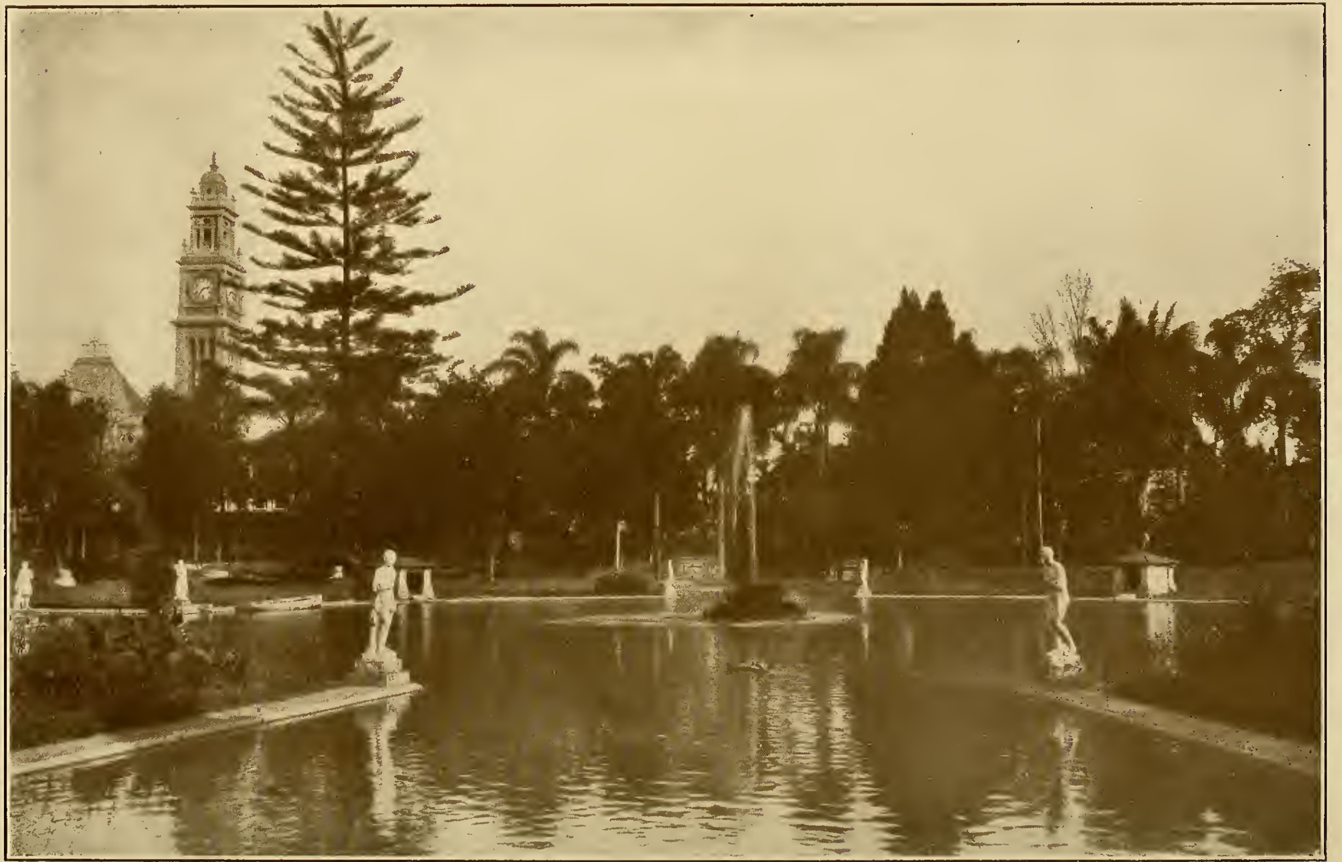
(3) The *Hinterland.* The new railway will open to settlement and productive industry many hundreds of square miles of forest and meadow. Colonists and agriculturists will be made welcome and a great future is expected from this new area.

(4) In the *State of Parana.* Through such a new country considerable difficulty has been found in advancing the railway. As in many parts of the United States some of the work must be done over again, but the principal problem has been successfully solved and the railway is now a fact.

which can be reduced from the 112 hours consumed to-day, to 60 hours at the most. But the actual journey to take into account is that from the city of Sao Paulo to Montevideo, which reduces the distance by 489 kilometers (304 miles), leaving only 2,676 kilometers (1,662 miles) of an altogether new and undeveloped route to be considered, a distance almost the same as that between New Orleans and Boston, which is 1,598 miles (2,571 kilometers).

It is quite conceivable that even the coffee from Sao Paulo will ultimately be carried clear through by this route, for it can be loaded on the cars at the warehouse in the plantation and be delivered, unbroken, to the warehouse in Montevideo, and this facility of movement may compensate for the cheaper sea transportation which necessitates at least two transshipments on the way. But even ignoring this possibility and that of the long haul, the stimulus to local traffic will ultimately be immense. Brazil needs wheat; it can be grown in Rio Grande do Sul, but until this agricultural result is secure the fields of Uruguay can now supply a market hitherto reached by a roundabout carriage from interior to sea and back again. Uruguay consumes hundreds of thousands of kilograms of maté a year; now this can be carried direct from the yerbales (places where it is gathered) to many parts of the interior of Uruguay at probably a lower cost than by sea. Many such exchanges present themselves as activities for the near future. The economic advantages, however, are by no means exhausted by the probable effect on industries already established.

Of far greater consequence to this new route is the unquestioned certainty that new centers of industry will at once be started. From Ponta Grossa, in the State of Parana, is a stretch of about 800 miles of new land, rich, if the word of every traveler can be accepted, with a climate and productiveness equaled only by the recently opened prairies and uplands of Oklahoma and Indian Territory. For years feeble attempts at occupation and settlement have been made, but only now can it be said that the door is thrown open to the ambitious colonist. It is obligatory on some of these railways to introduce settlers into the areas touched by them; it is plainly to their interest to fill the empty spaces with the makers of permanent homes, in the same way that the great West of the United States has been filled. Perhaps they will come from different sources and develop in different ways, but the main feature is sure to be preserved, and that is the tilling of the land for its agricultural resources. Moreover, the timber resources demand notice. Brazil has for generations been noted for its hardwoods, gathered in the tropical areas at the north, but in Parana the pine and related woods cover thousands of square miles, and promise a fund of wealth hardly taken into the reckoning hitherto. Now that the railway is in operation, it is only a question of time



THE LUZ PARK AND RAILWAY STATION IN SAO PAULO.

Here the trip practically ended; for although to complete the route from capital to capital it is necessary to continue to Rio de Janeiro, yet the railway from Sao Paulo on has been in operation for many years. This union station in Sao Paulo is a fine, large, solid structure, comparable in appointments to those in Europe. In front of it and almost in the center of the city is a beautiful park, which is one of the most complete garden spots in all South America.

before south Brazil, on its interior plateau, will fulfill Humboldt's prophecy as being a potential granary of the world.

The strategic value of an inland highway may not at first be evident to the student, but careful consideration will prove its truth. All previous encouragement has been devoted to the construction of railways from the coast to the interior, to transport products of the plateau to the coast, and to supply to residents of the interior such goods as were necessary for their work and comfort; these have been the first requisites of a colonial policy. But two great objections can be raised to a continuance of that system. The forces of a people are not strengthened so long as their regular intercourse is restricted, as it must be in such cases, to foreign influences above those that are domestic and native; and the activities of a government are hampered so long as it must carry on its relations (like the postal service, for instance) with national territory by sea alone, and often under a foreign flag. It is not natural to think always of reaching one part of a country from another part in no way except by salt water. In its infancy the young Republic followed the example of the Empire, and its loosely associated parts did the best they could to get into communication with the rest of the world through the sea and along the coast. But Brazil is now full grown, the Federation has matured, and every strategist will approve its strong desire to link together

CATTLE IN THE STATE OF SAO PAULO.

Although Sao Paulo is famous chiefly for its immense coffee production, it has nevertheless other agricultural industries, not the least being the cultivation of cattle. As the State is well populated, there is a steady demand for meat, and the market is not even supplied by the local herds. The railways in the State have been in operation for many years and are in general prosperous.

the various States by interior bonds of such a character. This has become a policy in Brazil. Just recently Rio de Janeiro was connected by rail with Victoria; in the north, Natal and Maceio are in touch with each other; plans are on foot to connect these two systems, however great may seem the distance to be overcome. Surveys have been made to extend the railway far up into the States of Minas Geraes and Goyaz; ultimately the terminus will be a junction with the Madeira and Mamore Railway, although its realization may be years in the future. Toward the west actual construction has begun toward the Paraguayan frontier, and another objective point is the port of Corumba (State of Matto Grosso) on the Paraguay River, opposite the Republic of Bolivia. By this comprehensive plan the circumference of Brazil will be in touch with its political center at Rio without passing over the border. So-called practical men will laugh at these schemes of the visionary, as they laughed at the policy of expansion in the United States 50 years ago, where some of the scoffers lived to make homes in the wilderness they derided. No longer than 10 years ago the same ridicule was flung at those who proposed to build a railway from Sao Paulo to Montevideo, across the wildernesses of Parana and Santa Catharina, and now they are compelled to see with their own eyes the trains hurry by, and they will soon find the empty spaces given over to productive labor, while every movement is within the Government's own proper sphere of influence. By such advances as this, to its economic and strategic advantage, does Brazil demonstrate the ambitions at the heart of the nation.

THE COFFEE INDUSTRY ∴

JUDGING from the many articles appearing in the late magazines descriptive of the coffee industry, a widespread demand for information on that subject must be much in evidence.

Since the publication of our article on "Coffee," in the November, 1908, issue, many publications have quoted therefrom and many writers have dealt with the subject.

Among those noted in our exchanges are two which are exceptional, inasmuch as they contain a wealth of detail relative to the growing of the plant and the preparation of the beans for the market not usually found in articles of this character. Both articles—one of which is really a reproduction by The Spice Mill, of New York, of the address delivered by Sr. J. C. Alves de Lima, commissioner of the State of Sao Paulo, before the New York Coffee Exchange, and the other by Robert De C. Ward, appearing in the October National Geographic Magazine under the caption "A visit to the Brazilian coffee country," deal with the industry as it is carried on in the State of Sao Paulo, Brazil.

Of course the industry is here carried on under most favorable conditions owing to the peculiar adaptability of that region as to location, soil, and climatic conditions to the growing of the coffee tree. The fact that more than one-half of the world's entire coffee supply comes from the State of Sao Paulo alone proves this to be true. But we must not lose sight of the fact that there are other countries in Latin America where conditions are also very favorable and where the coffee industry is carried on on a very large scale and with splendid financial results.

Naturally the first important consideration for the coffee planter is the character of the soil and the "lay of the land." Sr. Alves de Lima says in his address:

> The most suitable land for coffee ought to have for its first strata a red purpled earth of volcanic origin with no particle of clay in it, carrying enough proportion of iron and sand to become porous, allowing the taproot of the tree to go about 6 feet right into the ground. The tree is bound to die at any time should these conditions be not properly fulfilled. The soil ought not to be too steep nor too flat, but of a gentle slope with enough inclination to allow humidity to permeate through the taproot and through the horizontal roots without soaking the soil. A steep soil would also have the tendency to carry away the humus so indispensable to the tree doing its duty every year. Coffee is planted in rows by using for seed the bean in hull and at such a distance, about 14 feet apart, so the heat and the light will penetrate through every limb of the tree equally. That explains why, under the Equator, we always prefer the north side to the south side for the cultivation and preservation of our large coffee plantations.

Again—

To start (formar is the proper word in Portuguese) a coffee plantation we usually select a tract of land, a virgin forest, by felling its trees and cutting down all its bushes right to the ground. The soil must be about 2,000 feet above the level of the sea.

A BRAZILIAN COFFEE TREE.

The coffee tree if left to grow in its natural state reaches a height of 14 to 18 feet. Under cultivation it is not permitted to grow higher than 8 feet, in order to facilitate the gathering of the crop and increase the production per acre. The tap root of the tree reaches straight down to a depth proportioned to the height of the tree—6 feet or more. The leaves are at first of a bright green color, turning into the olive shade when full grown. The average yield of a Sao Paulo coffee *fazenda* is about 32,000 pounds for every 10,000 trees.

that preserving the trees from the frost. [Note that Sr. de Silva is now speaking of ideal conditions in Sao Paulo.] Some planters burn the big trees and bushes after being felled, while others, more farseeing, more intelligent, ship the best wood to the market and allow the other, of poorer quality, to decompose through exposure to the atmosphere, this new earth constituting in time the best fertilizer that, under the circumstances, we can supply to the coffee trees.

The climate is the next very important consideration. In regions very near to the equatorial line the coffee trees need to be shaded by the planting of other trees. In regions farther removed from the Equator shelters against the cold winds from the polar regions are often necessary. Elevation is also an important factor, since in the hotter lowlands near the coast more shade must be provided,

COFFEE TREE IN BLOOM.

The coffee tree in full bloom produces from 12 to 16 buds in the axilla of each leaf and is a beautiful spectacle. This beauty is, however, very fleeting, as on a *fazenda* one may see the thousands of trees in full blossom one day and two days thereafter the ground may be covered with these sweet-scented white flowers. Two or three efflorescences occur before the buds become completely ripe.

especially for the young plants, than in regions having an elevation of 2,000 feet or more. Again, the average rainfall is a feature, inasmuch as the plants are obtained in one of three ways—(1) by using the seedlings that grow up spontaneously; (2) by sowing the seeds in nurseries and afterwards transplanting them; (3) by sowing them in the places they are to occupy finally. Of these the first way is the poorest, as the plants deteriorate and yield constantly poorer results. The second method is usually adopted in regions where the rainfall is not sufficient throughout the year to keep the young plants alive. The third method—planting the seeds directly in the open fields—is by far the preferable, and is used in regions where the rainfall is sufficient for the plant to thrive.

Again reverting to Sr. de Lima's address:

> As a rule we plant coffee, not in valleys where the soil is generally rich in humus, but right upon the mountains with a gentle slope to protect them from the frost which visits us every year with more or less intensity. While frost, as a rule, puts the planter back one year, still the lowering of the temperature has the advantage of doing away with all sorts of plagues, microbes, etc., which are bound to affect the coffee trees after some years of more or less even temperature. One year of frost, equal to the ones we had just this year, will mean a big crop two years from now. The frost is, as you see, a blessing in disguise, even if we have to put up with one or more years of small crop. To give you an idea of what I am asserting I could cite some old districts in the State of Sao Paulo where coffee used to grow in abundance. With the cutting down of the forests in that particular section of the State a change began to take place in the atmosphere and the consequent disappearance of the frost. Our coffee trees, in view of that, began to appear weaker and weaker all the time, until it ceased to be a paying business in that district.

The trees begin to bear in from three to four years. The harvesting usually begins in May and lasts into August and sometimes even till September. In picking the coffee the boughs are pulled down with one hand and stripped from base to tip with the other, berries, leaves, and twigs all falling to the ground under the tree, where frequently a canvas has been spread to catch them and facilitate the gathering. All the details of the harvesting are set out by Mr. Ward in "A visit to the Brazilian coffee country." His opportunities for noting the entire process were most excellent, as he was a guest on two of the most noted "fazendas" of Sao Paulo—that of Santa Veridiana and also of Santa Cruz. The cultivation of the plant and the handling of the product has been reduced to a science on these magnificent plantations, both being equipped with the latest and most expensive appliances—all designed with the view of reducing the cost of production in the saving of labor, time, and trouble.

HOW THE BERRIES ARE PREPARED.[1]

It is customary to classify the methods of preparing coffee for the market into the wet and the dry. They are alike after a certain stage, and there is a disagreement among experts as to the relative merits of the two in producing the best coffee. In the dry process the berries are dried before the pulp is removed, and then outer covering, pulp, and inner coverings are removed together. In the wet process the pulp is first removed in water, and the drying and removal of the inner envelopes come later.

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[1] The following account of the treatment and handling of the coffee berries is taken almost altogether from Mr. Ward's article, which is based on his observations of tne methods employed upon the two large, up-to-date fazendas mentioned above.

COFFEE BERRIES.

A twig of the coffee tree showing how the berries grow. It is when the leaves fall that there issue from the small stems groups of seeds at first yellow and coarse to the touch. When they ripen they begin to redden until they become the coffee berries. The seeds, or beans, are convex on one side and flat on the other. Two seeds grow in each berry, their flat surfaces contiguous, and each one is covered by a delicate silver-colored skin; then comes a cartilaginous membrane of rough consistance, and then the pulp, which is mucilaginous, saccharine, and sometimes agglutinated, the outer part being covered by the outer skin.

A considerable water supply and a carefully planned system of small canals and of basins is needed in the wet method, and it is partly for this reason, as well as because of the preference of some fazendeiros for the dry method, that the wet method is not everywhere in use.

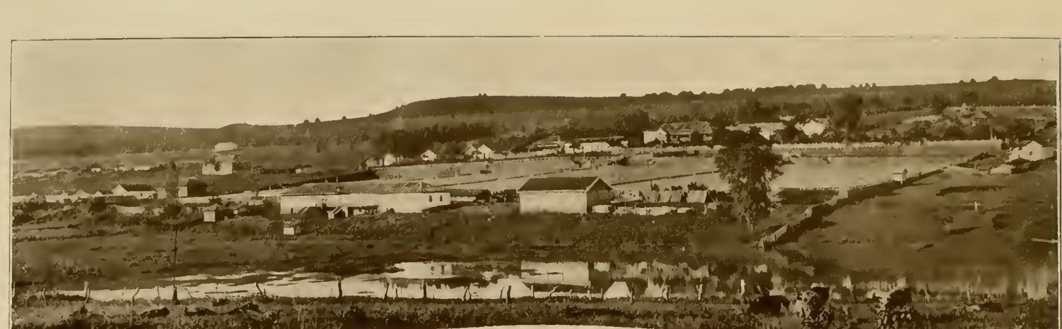
SEGREGATING THE RIPE AND UNRIPE BERRY.

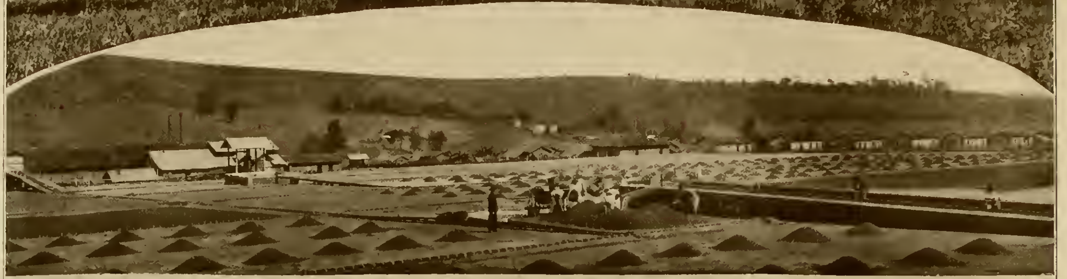
As they are brought from the harvesting, the coffee berries are ripe (red), or overripe (brown or blackish), or still unripe (green). It is impossible in picking to select only those berries which happen to be ripe. The contents of the sacks, preferably on the day of the picking, are dumped into a narrow cement or brick-lined canal through which a strong stream of clean water is flowing. This canal is supplied from a small reservoir, and is preferably built on a hillside above the drying grounds (terreiros) and the machinery, so that gravity may carry the berries to the successive early stages of the process of preparation. From this canal the water flows through a couple of large vats, or basins, being kept in motion both by the force of gravity and by means of long-handled wooden or metal rakes, or hoes, moved actively to and fro by workmen.

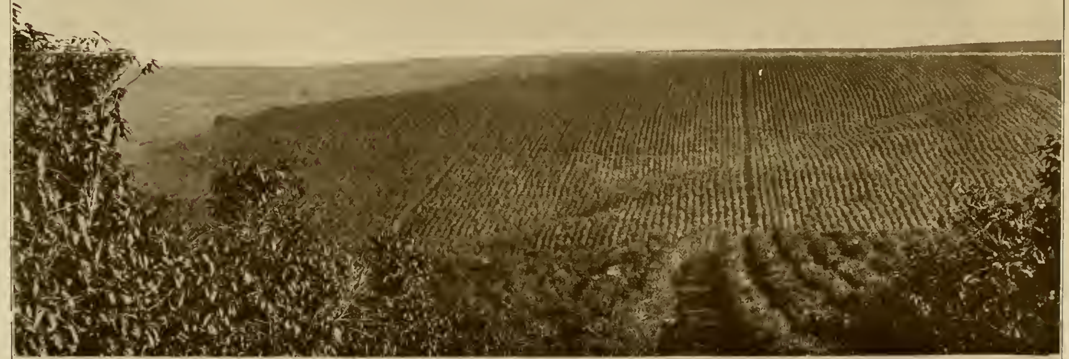
This manipulation results in bringing the unripe, light, imperfect, and dry berries to the surface of the water, while the heavier and riper berries sink to the bottom. By allowing the level of the water surface to rise all the berries which are floating on the surface can be run off into an adjacent maceration basin, where those which are not too dry are allowed to soften for a few hours, sometimes under canvas covers, before they are carried into the pulper (despolpador). If the berries are too dry for pulping, even after being softened, they are carried by water directly to the drying grounds, and are prepared by the dry method.

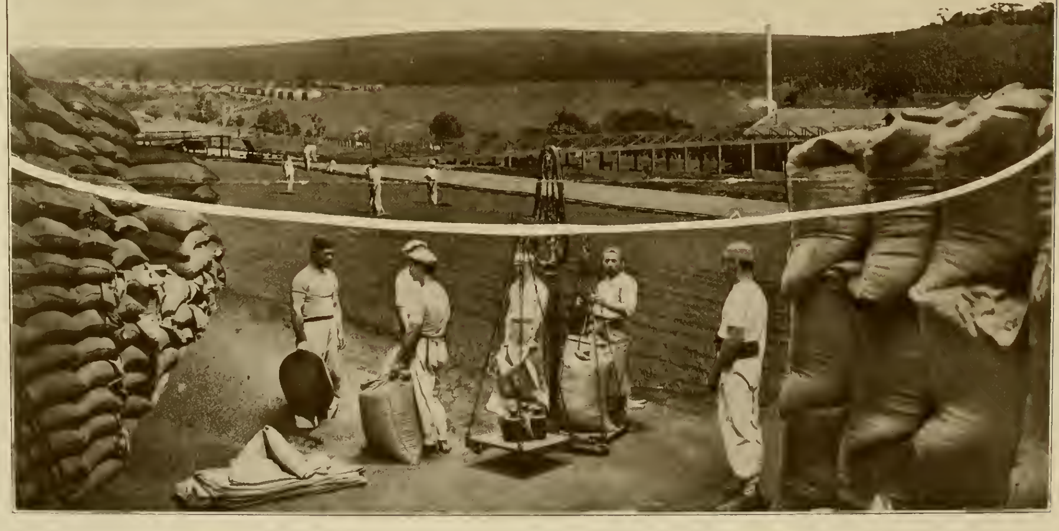
The ripe berries do not require the intermediate stage of maceration. These ripe berries which have fallen to the bottom of the first basin are there very thoroughly raked and shoveled, the water having been lowered, so that the men can stand among the berries at the bottom of the basin. The sand is generally carried off with the water through iron gratings at the bottom, or is collected at the upper end, until finally the clean, ripe berries are ready to pass out, down a narnow canal, with a stream of clean water. To the top of the pulper the berries are carried again by a stream of water, whose velocity is adjusted by a system of gates. The berries are dropped through the funnel-shaped top of the pulper directly into the machine.

Pulpers are made of different patterns, and are run by water, steam, or horsepower; but the general principle is the same in all of them. In one of the most widely used forms there is a revolving copper cylinder, whose surface is set with small knobs, or nipples, and is covered on one side by a surface of wood, or metal, or rubber, against which the cylinder impinges as it revolves. The coffee berries are









No. 1. General view of a Brazilian coffee *fazenda*, showing the gradual slope and lay of the land.
No. 2. The drying grounds. During the day the piles of beans are spread out in thin layers to facilitate the process.
No. 3. A typical view of the thousands of coffee trees planted in seemingly endless straight rows on one of Brazil's fine *fazendas*.
No. 4. In the background another view of a coffee *fazenda*, and workmen spreading the beans for drying. In the foreground—sacking and weighing the coffee for shipment

crushed between these two surfaces, whose distance apart can be varied to suit the particular size and condition of the berries at that time being pulped, and the pulp is thus macerated and loosened. The object is to accomplish this without injuring the two inner coverings of the seeds.

THE REDUCTION MACHINERY.

The pulper reduces the coffee berries to a wet mush, consisting of much water, coffee beans, and loose pulp. Most of the pulp adheres to the teeth of the cylinder and is dropped off at the bottom of the revolution, while the coffee beans, many of them still incompletely pulped, and all having more or less pulp adhering to them, are carried, always by water, into a large copper cylinder revolving on an axis slightly inclined from the horizontal and pierced with small, elongated holes, just large enough to let the pulped beans fall through, but keeping all beans which are not properly pulped moving on toward the lower end, where they fall into a second pulping machine, which is adjusted more finely and are passed through a second sorting process.

All coffee which is properly pulped, either by going through one pulper or two, is carried by water into brick or cement lined fermentation basins, which have a grilled bottom, so that the water may escape and leave the coffee in the basins.

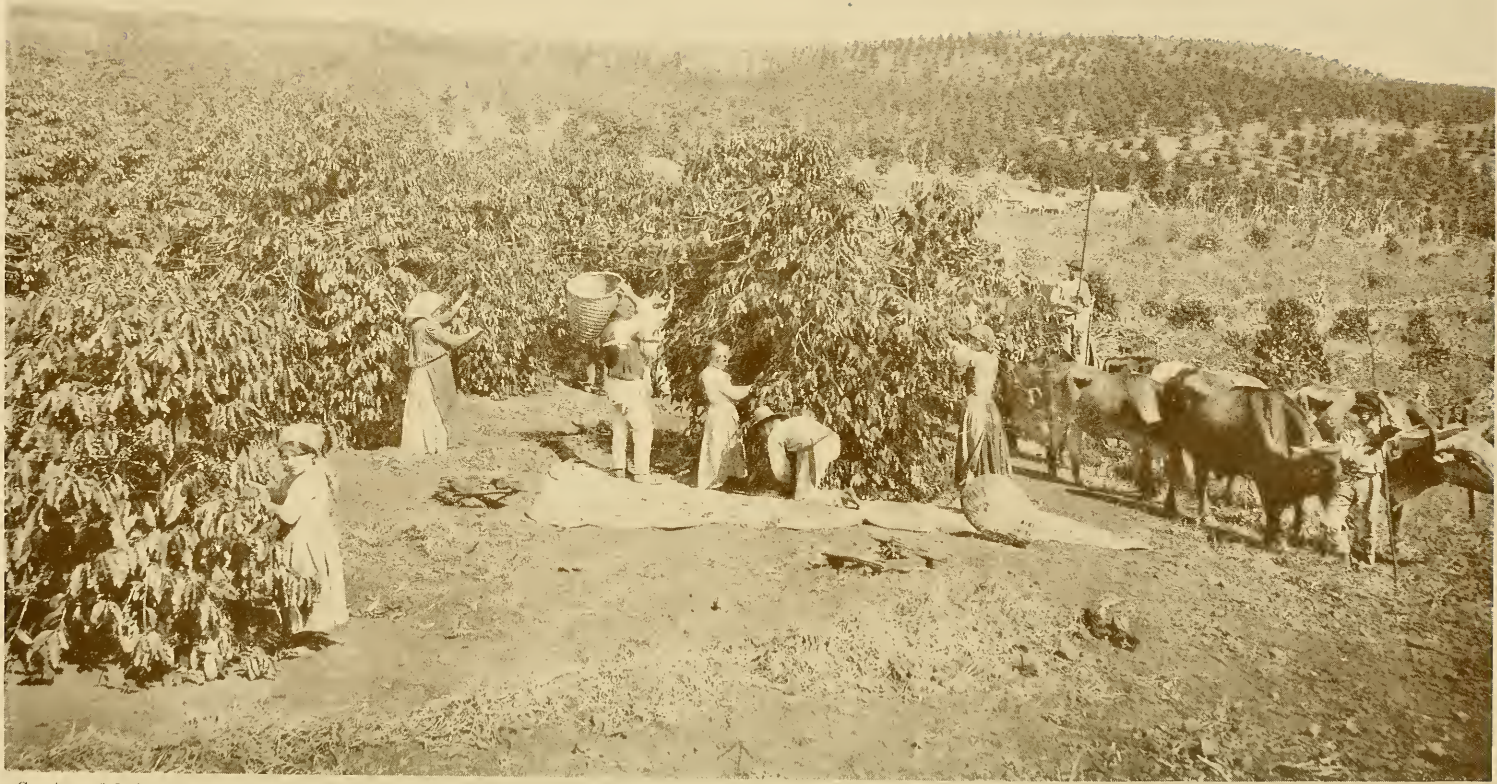
Here the beans are allowed to remain, usually between 24 and 72 hours, according to the condition of the berries and the external temperature, until a slight fermentation has set in. The object of this fermentation is to soften and loosen any still adhering pulp. They are then ready for the drying grounds, any still remaining pulp and external skin being later removed in the hulling machines.

THE DRYING GROUNDS.

The most important and the most critical stage in the preparation of coffee for the market comes when the beans, having had their pulp removed, are dried, in order that the two inner coverings may then be removed by friction.

The drying grounds are extended rectangular areas, paved with blackened tiles or bricks, separated from one another by one or two rows of bricks, so that the various lots of coffee in different stages of drying may be kept apart, and all together forming part of a great, gently sloping surface inclosed by walls. The pulped coffee is carried to these grounds either by water or in hand cars pushed by laborers along movable tracks, for distributing the coffee.

The winter weather (in Sao Paulo) is ideal for drying the beans. The time needed for thoroughly drying the berries varies greatly, and it requires constant oversight and care on the part of the



Courtesy of National Geographic Society.

HARVESTING THE COFFEE.

The usual method of harvesting is to let the berries, leaves, twigs, etc., fall directly on the ground, where they are later raked together with wire rakes with rounded teeth, and the first rough sorting is made. The next stage is a winnowing by means of a wire sieve, the hand being used to pick out the twigs and leaves and the wind blowing away a good deal of the dust as the contents of the sieve are thrown up in the air and caught again several times. In a less common method the results of the harvesting are allowed to fall onto cotton cloths spread out underneath the trees. This makes the gathering of the crop quicker.

administrador to see that each lot of coffee receives just exactly the proper amount of drying.

Excessive heat, too rapid drying, too little drying, too slow drying, all injure the quality, the flavor, the color of the beans, and therefore affect the market value of the coffee. It is upon the drying grounds that the administrador has the most need of all his training and experience. The duration of the drying stage naturally varies greatly, from a few hours to many days, and depends to a large extent upon the weather conditions. Coffee which has not been pulped takes much longer to dry. Thus far, in Brazil, there has been little resort to artificial drying, most of the growers preferring outdoor drying.

REMOVING THE INNER SHELLS.

The drying completed, the beans which have been pulped are still inclosed in their inner and outer skins or coverings, which are now dry and brittle. The next step is to remove these two envelopes. To accomplish this result without injuring the bean inside is the object of the ingenious and expensive machinery through which the coffee passes after leaving the drying grounds and before it is finally packed in bags for shipment from the fazenda to Santos.

The modern machinery now in use in Brazil for removing the two inner envelopes from the coffee beans is of many different patterns and makes, but the object is the same in all forms, viz, to manipulate the beans between two surfaces, one of them in motion, until by friction the envelopes or shells come off and are carried in one direction, while the beans go in another.

The general principle of the huller is very simple. A metal cylinder with a grooved or convoluted surface rotates inside of an adjustable metal cover, also grooved on the inside. The coffee beans, passing between these two grooved surfaces with much friction, gradually have their coverings rubbed off.

From the hulling machine the coffee goes through a second ventilator, which throws off the dust and hulls, leaving the coffee beans clean and ready for sorting, and then to a separator. This is usually a hollow wire or copper cylinder in three or four compartments, all communicating, each compartment having holes of a certain definite size. The cylinder is gently inclined and is kept revolving, the beans traveling slowly down the incline. Those which fit the openings in any one compartment fall out of the cylinder there; the others slide along into succeeding compartments until they strike the proper-sized opening and escape. They are thus classified as to size. Then they are sorted as to weight and finally packed into bags for shipment to the large coffee dealers in Santos. Here the beans are again sorted and carefully blended and repacked for export.

HIGHER EDUCATION IN BOLIVIA[1]

IF the student of the Bolivian educational system were to read into the word "university" the ordinary acceptation, he would report that the country supports six universities. This error has in fact been made in recent summaries of education in Bolivia. The term as used in this country does not mean a group of faculties teaching advanced courses in sciences, letters, law, medicine, engineering, etc., but includes all grades of public instruction from the lowest to the highest within a certain district. Of these districts there are six, and hence nominally there exist the six universities, viz, La Paz, Sucre, Oruro, Potosi, Cochabamba, and Santa Cruz. Each university has its rector who is dependent upon, and reports to, the minister of public instruction. The greater part of the rector's time and energies is naturally devoted to the primary and secondary schools of his district. As concerns the higher education, the faculties are independent of each other, even when two or more exist in the same locality. Each has its dean who reports directly to the rector of the district. Only two districts possess a plurality of faculties. At La Paz there are faculties of medicine, law, theology, and commerce; at Sucre, faculties of medicine, law, and theology.

The faculties of theology are practically independent of the State, receiving no subsidy either of buildings or money; their support and regulation both as concerns curriculum and discipline rest entirely with the church. The State does nothing more than to sanction the degree granted by naming the examining board in conformity to the decrees governing all examinations. The same conditions exist in the case of the independent faculties of law in Cochabamba, Potosi, Santa Cruz, and Tarija. These schools receive no support from the Central Government, but their degrees are recognized, providing the State rules of examination are complied with.

The Government is fully aware of the danger and loss of prestige caused by the multiplicity of professional faculties and is endeavoring to reduce the number, but the difficulty of traveling in a mountainous country, not yet adequately provided with railroads, and the spirit of regional pride has prevented as yet any noteworthy reform. The ministerial reports for the three past years have stated succinctly the question and urged Congress to correct the present unsatisfactory condition. Minister Bustamante in his report for 1909 set forth the situation most emphatically in the following words:

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[1] By Dr. Edgar Ewing Brandon.

> * * * Nada es mas cierto que confesar que Bolivia no ha tenido, ni tendrá en medio siglo mas, capacidad suficiente para organizar y sostener mas de una sola universidad, si es que sin infantiles verbalismos, vamos á dar á las palabras el sentido que viene de las cosas.

It is to be feared that in the effort to reduce the number of parallel faculties and at the same time allay regional rivalries the official school of medicine will be fixed at La Paz, and the school of law at Sucre. This would probably prevent for all time the much-desired foundation of a single strong university to which could be added faculties of sciences, engineering, and letters, with the resulting advantage of making a center of culture and learning that would be a pride to the State both at home and abroad. At present an effort is being made to reduce the number of law graduates by laying more stress on the daily class work and minimizing the importance of the final examination, and at the same time making the latter more severe.

The university tangle is so complicated that the Government is bending its energies principally to upbuilding the primary, secondary, and technical schools. A vivifying impulse was given to the cause of education in 1905 by the appointment of an enthusiastic and competent commission to visit other South American countries and Europe for the purpose of studying educational systems and methods abroad, and devising means for improving Bolivian schools. Two years were spent in investigation and in 1908 the chairman, Dr. Daniel Bustamante, and the secretary, Dr. Felipe Guzman, made thorough and illuminating reports. The immediate result was the establishment of the normal school at Sucre, the higher commercial school, and the practical normal and agricultural school for Indians at La Paz. Of these, more later. Another result which has not yet become a fact, but will probably be made a law by the present Congress, is the removal of primary education from the province of the present universities and the creation of an inspector general of primary schools with an inspector and force of visitors in each of the eight departments of the Republic. The commission reported and the Government realized that the first great need of the country is an adequate system of elementary schools and the formation through a normal school of a corps of teachers versed in rational, modern methods and devoted to their apostolate.

Hence the necessity of a normal training school, and, by decree of June 5, 1909, the school was established at Sucre, which, under the able directorship of Dr. Georges Rouma, a Belgian, has been a signal success from the very beginning. The State supports 32 scholarships divided among the eight departments. These students are provided with everything—instruction, books, board, clothing, and medical attention. In return the student contracts to teach at least five years in whatever part of the Republic he may be assigned. In addition to the scholars there were 27 paying students in 1911. The entrance examination covers the studies of the elementary school, and the applicant must be 16 years of age. The course of study runs four years, of which the first two are entirely academic, while in the last two are added the science and art of teaching with practice in the model school. The curriculum is thoroughly modern, embracing manual training, domestic economy, modern languages, music, physical and moral education, as well as the ordinary subjects. The students are of both sexes.

On account of the lack of higher education for girls in Sucre the director and teachers of the normal college opened in 1910 a high school for girls not intending to teach. To this work all the teachers gave their time gratis, and the expense of rooms was borne by the director and a public-spirited citizen of the city. Bolivia has no Carnegies and Rockefellers, but it is a good augury for the cause of education in the State when teachers and citizens will give of their talents and money in proportion to their humble ability.

Another fruit of the new movement in Bolivian education is the national school of commerce at La Paz. The institution was organized in 1910 and is using a building which, although not constructed for a school, meets the immediate needs. It is two stories in height, with two interior courtyards, one for men, the other for women, each having its own entrance. There are eight classrooms comfortably furnished, besides offices and a commercial museum in which are displayed samples of manufactured goods, grains, woods, minerals, etc. Where it is not possible to exhibit specimens, charts are used giving illustrations of the products. Two rooms are devoted to practical classes in banking, customs, importation, and exportation. The school is in fact as well as in name a higher school. For admission into the men's section graduation from the secondary schools is required. The course of study covers three years, with a fourth year optional for the special training of administrative officers and agents of the State railways. The first two years of the regular course are the same for all; in the third year specialization is required, one group studying banking and general commercial operations, the other customhouse and consular service and public finance. The course of study is eminently practical. In the first years are given ordinary commercial operations, physics, chemistry, bookkeeping, stenography, commercial law, and political economy. Throughout the entire course, whether of three or four years, great importance is placed upon modern languages. The faculty numbers 14, of whom 5 are foreigners, including Belgians, Englishmen, and Americans.

The course for women is not on the same high plane as that for men. Only an elementary education is required for admission, and the course of study covers but two years, including only the elementary commercial subjects.

During the year 1911, 80 men and 40 women were enrolled. Dr. Felipe Guzman, the present director, is an enthusiast on the subject of commercial education and recognizes its importance for his countrymen in the new economic era that is opening in Bolivia.

Another innovation in public instruction in Boliva is the creation of a school that has no connection whatever with higher education; on the contrary it is a school lower in grade than the lowest, and yet in the minds of farseeing statesmen it is more important than the highest. Boliva has in round numbers a population of 2,000,000, three-fourths of whom are Indians, who still speak their native tongues and have steadfastly resisted for centuries the efforts of the white race to bring them into sympathy with modern ideas. Nearly all are agriculturists, patient and laborious, but wedded to their ancient and primitive methods. They produce all they use, make their own clothing, farming implements, etc., and as an economic factor are almost negligible. How to break through their crust of reserve and conservative tradition, and make them an integral part of the nation's economic life, is a question that has much concerned Boliva. They have showed themselves obdurate to ordinary education, and it has but recently occurred to statesmen that the ordinary education would be of little value to the Indian even if he were willing to receive it. After studying the systems employed at Hampton and Tuskegee for the education of the Negro in the United States, the commission advised the creation of a school that would make manual training and elementary agriculture the basis of study. The result was the creation in 1911 of the Escuela Normal de Preceptores de Indigenas. The institution comprises two sections, one of two years' study, the other of four. The object of the first section is to prepare boys in practical agriculture and the simplest manual arts, so that when they go back to their native villages they may become a bit of leaven in the great mass of ignorance and conservative tradition. They are taught to speak, read, and write Spanish. They will carry notions of modern methods in agriculture to their own people, who will not learn from the white man. In this section no "book" instruction is given except in reading, writing, and the very simplest arithmetic, and even these arts are based upon the work in the field and in the shop.

The second section has a course of study of four years, and it is possible for a boy to pass from the first section into the second if he shows the necessary aptitude, but it is probable that this section will be filled mostly by mestizos, who, in addition to speaking both Spanish and one Indian dialect, will possess a rudimentary education before entering the schools. The object of this section will be the training of elementary teachers for Indian schools, either stationary or traveling, which in their turn will transmit the notions of modern agriculture and manual arts at the same time teaching the "three Rs" in Spanish. The basis of the four-year course is likewise hand and field work with the addition of normal training.

The instruction is free, and for those boys who do not live in La Paz board and lodging, as well, are furnished by the State. The school occupies two buildings in the outskirts of the city, one used as dormitory and office, the other for classrooms and shops. Back of the latter is a plot of ground for agricultural purposes. During 1911, its first year, the school has 30 pupils, 15 in each section. Larger entering classes are expected in the future, and when all classes are in operation it is intended that 200 or more shall receive the advantages of the institution. The problem of making the Indian a large economic factor, as well as bringing him into some slight touch at least with the national life, is a difficult one at the best. Older methods have failed signally; it remains to be seen what the modern methods can accomplish. The new practical school gives promise of good results.

THE FLAGS AND COATS OF ARMS OF THE AMERICAN REPUBLICS

HONDURAS.

THE present Republic of Honduras comprises the territory occupied by the Province of Honduras in the Kingdom of Guatemala under the old Spanish régime, so far as this territory was at that time delimited. The 15th of September, 1821, is celebrated in each of the five Central American Republics as the birthday of its independence. This is the day from which is counted the throwing off of the yoke of the Spanish dominion by the Kingdom of Guatemala and the establishment of republicanism in Central America.

Honduras in 1821, together with the other Provinces of the new Republic, joined its fortunes to Mexico, then the empire under Iturbide. This union was short lived. Indeed, it was a union in theory more than in fact, for in each of the Central American States there existed a strong and active party opposed thereto. The union, on the fall of Iturbide, was dissolved and the Central American federation established. The federation itself represented but little more centralized strength than did the empire under Iturbide. In reality, it amounted to not much more than a defensive league against Spain. On July 1, 1824, Honduras adopted a separate constitution. This constitution recognized the federation, but conceded to it little power.

Following the constitution, on October 3, 1825, a law was enacted providing a national coat of arms and flag. The coat of arms and flag then adopted differed but little from those now in use, the principal difference being that in the first coat of arms, in the center of the escutcheon, appeared the Phrygian, or liberty cap, and the inscription surrounding the escutcheon read, "Estado de Honduras de la Federación del Centro" (State of Honduras of the Central Federation).

The old federation, so far as Honduras was concerned, was dissolved on October 28, 1838, by its secession therefrom. Absolute independence was declared.

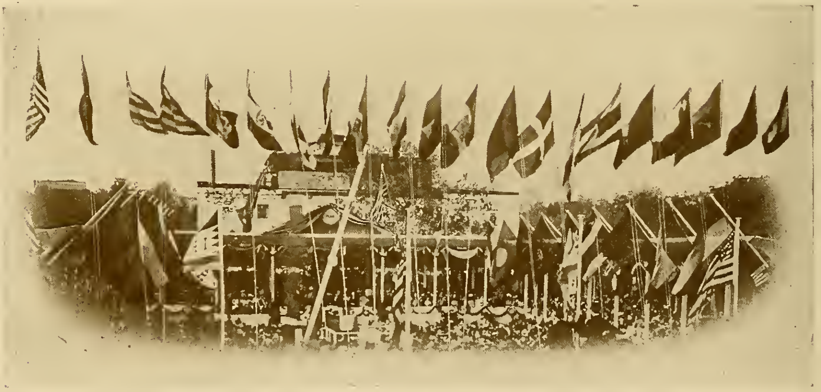
There appears to be no record for nearly 30 years following the secession of any official change in the flag or coat of arms. However, there are illustrations of a coat of arms of this period, and even later illustrations of the same, in which the legend reads, "República

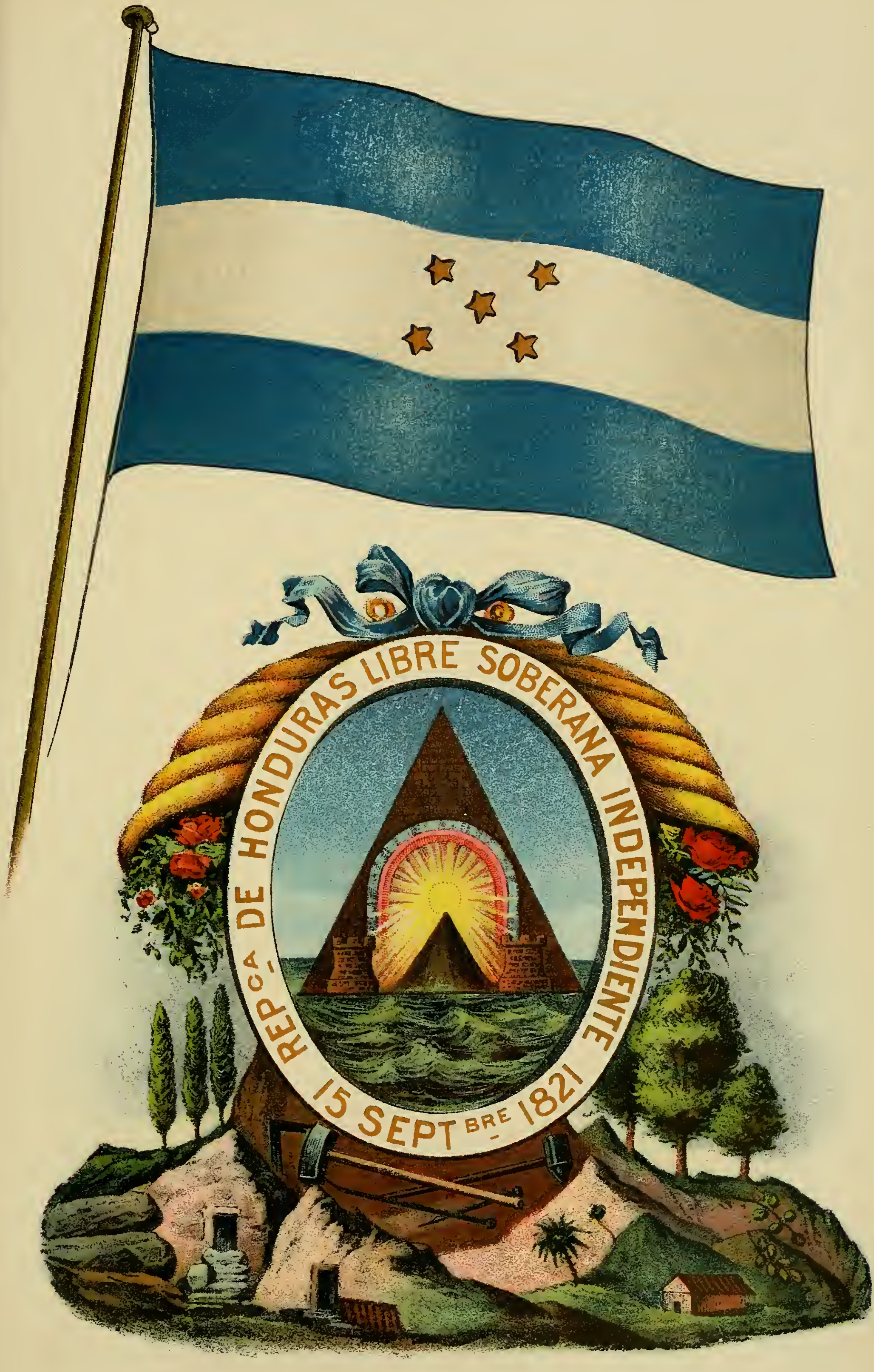
Libre de Honduras Proclamada en 15 de Septiembre, 1821" (the Free Republic of Honduras Proclaimed September 15, 1821). This coat of arms bore the Phrygian cap in the center. Another variation of the coat of arms, with the legend "Dios, Unión y Libertad, 15 de Septiembre, 1821" (God, Union and Liberty, September 15, 1821), was also used. A third variation appears during this period to have been made in the legend to read "Rep^{ca} de Honduras Libre Soberana Independiente, 15 Sept^{bre} 1821" (Republic of Honduras—Free, Sovereign, Independent—September 15, 1821). This last legend is the one now in use and is, according to Sr. Don Alberto Membreño (former envoy extraordinary and minister plenipotentiary of Honduras at Washington), the one referred to in article 4 of the law below mentioned.

On February 16, 1866, the National Congress of Honduras enacted the law of the flag and coat of arms now in force. The essential provisions of the law are as follows:

> ARTICLE 1. The flag of the Republic of Honduras shall be like that of the old Central American Federation—two blue stripes and one white stripe between, placed horizontally, and in addition a group of five blue stars, five-pointed, in the center of the white field.
>
> ART. 2. The stripes of the flag to be three and a quarter yards (Spanish) long and nine inches wide.
>
> ART. 3. The flag above is the merchant flag. The war flag shall be of the same dimensions and colors and bear in addition the coat of arms in the center of the white stripe, with the five stars beneath, the same arranged in semicircular form.
>
> ART. 4. The national coat of arms shall be that now in use, with the single difference that it will bear a setting sun in place of the Phrygian cap which it now has.

The dimensions of the flag as given in the text of the decree are not at present followed, the length—3¼ Spanish yards with a width of only 27 inches—being considered disproportionately long and narrow.




REP^CA DE HONDURAS LIBRE SOBERANA INDEPENDIENTE
15 SEPT^BRE 1821

HONDURAS.

ECKERT LITHO. CO., WASH., D.C.

NATIONAL HOLIDAYS OF THE AMERICAN REPUBLICS

HONDURAS.

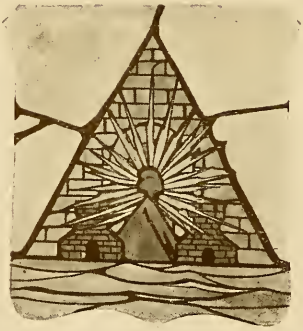
THE line between what may be properly called a national holiday and a popular holiday is seldom clearly drawn in any country. The disposition to celebrate the anniversary of certain events is world-wide. It is only when the event is of peculiar significance to the country, or, better still, when it marks some great political or social step in the progress of the country, that the anniversary of the event becomes in truth a national holiday.

In Honduras many holidays are observed, both religious and secular. Most of the latter are in their nature national holidays, but in Honduras, like in the other American Republics, the one great national holiday is that which marks the anniversary of the republican birth of the country. Just as the Fourth of July is the great national holiday of the United States, so in all the Latin American Republics there is one day chosen for annual celebration as marking the severance from European and monarchial fetters. In most of the Latin American countries, as in the United States, a student of history, critically inclined, might doubt the peculiar fitness of the day chosen, or the particular event celebrated, as not being in fact the true birth of the Republic. Republicanism is a plant of slow growth, and it is often difficult in any country to assign a precise day as that on which it first unfolded its leaves, or to ascribe to a given event in a particular place a greater significance than to some other event, at some other time, in some other place.

In Central America, however, there is one day which stands out more prominently, and one event of greater moment in connection with the establishment of republicanism, than any other. There may be a difficulty from the historical standpoint in the United States in ascribing a commanding significance to July 4, 1776, just as there is difficulty in ascribing a like significance to a particular date in some of the Latin American countries; but in Honduras, as in the other five intendencias composing together the "Capitancy general of Guatemala," or the "Kingdom of Guatemala," as commonly called, there can be no doubt that September 15, 1821, marks the birth of the new régime.

For more than 10 years in Honduras and in the sister intendencias the seed of republicanism had been sown, and on numberless occasions and in numberless places the growing plants had broken through the crust of Spanish despotism into the light of day. But these uprisings were in their nature sporadic. They did not endure. They accomplished nothing directly. Indirectly they were of enormous consequence, for republicanism was not killed. There were other seeds ripening in the ground, ready with favorable conditions to burst into light. The occasion came under the capitancy general of Carlos Urrutía, a man of advanced years and pacific temperament, incapable physically or morally from playing the part of despot which, prior to 1818, had been played by his predecessor, Gen. Bustamente. The spirit of liberty was abroad. Like a fever it spread through every hamlet and village and countryside of Central America. It would have been impossible to suppress the new movement. The capitan general surrendered his power into the hands of a subordinate, Gabino Gainza. The latter made no effort to oppose the will of the people; in fact, he joined them and became one of their leaders.

During the early part of September, 1821, there was a general gathering at Guatemala City of patriots from all the Provinces. On the evening of the 14th the people were called to arms, and responded practically en masse. The next morning in the palace the capitan general, Gainza, met the leading men of the city, the deputies of the Provinces, the archbishop, and other prominent men, and there agreed that the independence of the Republic of Guatemala should be proclaimed. Announcement of this fact was made to the expectant thousands surrounding the palace, most of them armed. This proclamation was the birth of the Republic of Honduras. The date on which it was made was the day of freedom, and is the great national holiday alike of Honduras and of Guatemala, Salvador, Nicaragua, and Costa Rica.



RECEPTION OF MINISTER FROM GUATEMALA ON SPECIAL MISSION ∴ ∴

IT is with much satisfaction that the BULLETIN OF THE PAN AMERICAN UNION takes this opportunity to extend a cordial welcome to Sr. Don Joaquín Mendez, envoy extraordinary and minister plenipotentiary, on special mission from the Republic of Guatemala to the United States. Sr. Mendez officially presented his credentials to President Taft at the White House, and in his remarks conveyed the good will of his country and the kindly wishes of President Cabrera toward the President and the people of the United States. In presenting his letters of credence, the Minister said:

MR. PRESIDENT: I have the high honor to place in your hands the autograph letter by which the President of Guatemala accredits me as envoy extraordinary and minister plenipotentiary on special mission near the enlightened Government of the United States of America.

The instructions of which I am the bearer will enable me, through the support I shall doubtless receive at your hands and those of your worthy collaborators, to draw even closer, if that were possible, the ties of perfect friendship which have always existed and must exist between the two people and Governments; and, at the same time, I shall do all that may be necessary to render more and more effective the solidarity that binds them in the concert of the New World, both in their political relations and in the compenetration of their economic elements.

I beg you to be pleased to accept the sincere wishes of Guatemala and of President Estrada Cabrera for the unbroken greatness of the American Nation, and for the happiness of its illustrious President, which wishes it is also my personal pleasure and honor to present to you.

President Taft replied as follows:

MR. MINISTER: It gives me pleasure and satisfaction to welcome you to Washington and to receive from your hands the letter of His Excellency the President of Guatemala accrediting you as envoy extraordinary and mininster plenipotentiary of that Republic to the United States on special mission.

I am gratified to learn that the instructions of which you are the bearer have been happily framed to draw even closer, if possible, the relations of perfect friendship existing between the two Republics. I desire to assure you that every effort will be made by me and by this Government to cooperate in all possible ways with you to strengthen the ties of constant cordiality, firm friendship, and economic relationship which bind together the United States of America and the Republic of Guatemala.

I thank you for the sincere good wishes which you convey to me in the name of the people and the President of Guatemala, and ask that you will express to President Estrada Cabrera my cordial greetings to him and my best wishes for his personal welfare and the ever increasing prosperity of the nation of which he is the Chief Executive.

I thank you for your personal good wishes, and trust that you will find your sojourn in the United States most agreeable.

ADDRESS OF HON. JOHN BALL OSBORNE

THE BULLETIN has pleasure in reproducing below excerpts from the address on "The trade-promotion work of the Department of State," delivered by Hon. John Ball Osborne, Chief of the Bureau of Trade Relations, Department of State, at the second annual banquet of the American Manufacturers' Export Association, New York, September 26, 1911. The remarks of Mr. Osborne are of particular interest, since they bear directly upon a subject which marks one of the chief phases of the activities of the Pan American Union, namely, the development of trade and commerce between the American Republics.

(Photo by Harris-Ewing.)

HON. JOHN BALL OSBORNE.

Chief of the Bureau of Trade Relations, Department of State of the United States.

Mr. President and Gentlemen of the American Manufacturers' Export Association:

Every American business man who understands what the various agencies of his Government are doing for the extension of the foreign commerce of the United State has just cause for patriotic pride. The systematic and energetic promotion of that commerce has become one of the most serious and important functions of the National Government. Two great executive departments, the Department of State and the Department of Commerce and Labor, so coordinate their activities and cooperate in foreign and domestic fields as to constitute a service for the American producer, manufacturer, and exporter that is unsurpassed by any similar service of any other country. This service affords information, offers advice, broadens opportunity, secures equality of treatment, suggests initiative, and inspires confidence in multifarious enterprises in foreign countries that would not and could not be undertaken by our citizens if such governmental service did not exist. It points the way of opportunity, but leaves the details of execution to the ability and willingness of the beneficiary private interests.

* * * * * * *

Reverting to my statement that the service rendered to the business interests of the country by the United States Government is superior to any like service abroad, I desire to refer briefly to a tour of investigation in Europe which I made last year, on behalf of the Department of State, in regard to the organization and methods of the various Governments in the promotion of their foreign trade. I had been in doubt as to whether there might not be quite a number of features in their systems better adapted for trade promotion than our own methods. After careful inspection in the European capitals, however, I returned convinced that, on the whole, the trade-promoting institutions of the United States Government are the best in the world, and that we have but little to learn in this respect from any source.

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To be perfectly frank, however, I did find two or three details in which European Governments appear to excel our Government. In Germany, for instance, I found in operation a wonderfully thorough system of reserving for German traders the valuable trade intelligence transmitted by German consuls and commercial attachés by disseminating it confidentially to German manufacturers and exporters throughout the Empire through the medium of their respective chambers of commerce. While it is almost impossible to duplicate that system in the United States, for the reason that our commercial bodies are variously constituted, with diverse objects, and do not possess the quasi-official status enjoyed by the German chambers of commerce, the Secretary of Commerce and Labor is, nevertheless, performing a wonderfully effective service to American business interests, by extending the system of confidential bulletins based upon information furnished by our foreign representatives.

Another European practice that I admired, and which has just been adopted by our Government, relates to the official conferences held between consular officers on leave and business men who are interested in trade with the foreign countries where the officers are stationed. I found this system in successful operation in France and Belgium. In the former country the conferences are held in the national office of exterior commerce at Paris. French consuls on leave are expected to be at the service of French traders at stated times, announced in an official publication. It is the same in Belgium, where the conferences are announced in the Bulletin Commercial and held in the Commercial Museum at Brussels. It is a great advantage for a manufacturer or exporter who is engaged, or intends to engage, in trade with a particular country to confer personally with a consul fresh from the scene and thoroughly acquainted with all practical details wanted by business men.

By an arrangement between the Department of State and the Department of Commerce and Labor this system has recently been adopted in modified form, for, of course, the city of Washington would not suffice as the scene of trade conferences. In order that American manufacturers and exporters may have every opportunity to consult with consular officers who are in the United States, on leave or otherwise, in regard to commercial and industrial conditions in their respective districts, the Department of State has instructed all consuls intending to visit the United States to notify it, as far as possible in advance, of date of arrival and periods of stay in the principal business centers. The Department of Commerce and Labor has arranged to give prompt publicity to this information in the Daily Consular and Trade Reports, so that it will be brought to the attention of the business public and thus commercial organizations in the industrial centers will have an opportunity to arrange for trade conferences with the consular officers in question. In this connection the State Department has instructed consular officers to prepare themselves, before going on leave, to answer accurately such practical questions as the business men are likely to ask them in regard to trade customs and tastes of the people in their districts, discounts, credits, shipping and banking facilities, tariff rates, etc.

* * * * * * *

The American Consular Service, intelligently reorganized and placed fairly and squarely upon a merit basis, with admission guarded by a strict examination system, is to-day in point of efficiency second to none. The sun never sets upon its untiring activities. It reaches out to the remotest parts of the world and does the pioneer work that individual efforts could never accomplish. It is the tactful, watchful, persistent representative of the American business man, even though he may be unaware of its value. New outlets abroad for American products are constantly being opened up through the trade reports made by consular officers, and the Department of State has in its files the record of many concrete cases where American trade has been materially extended as a direct result of consular activity.

* * * * * * *

How well the manufacturers and producers of the United States have responded to the increased facilities and opportunities made available to them by their Government is revealed by the official statistics of exports of domestic merchandise in the fiscal year ended June 30, 1911, which, for the first time in our history, passed the two billion dollar mark, exceeding the figures for the preceding year by more than $300,000,000, and those of 1907, hitherto the banner year, by $160,000,000.

* * * * * * *

The Diplomatic Service of the United States has become far more effective than formerly as an agency in our trade expansion. Besides the famous Argentine battleship contracts, immense orders for railroad supplies, ordnance, powder, paper, coal, and other commodities for different countries have been placed with American firms. In the membership list of your association I notice the names of some of those who have profited. In fact, in the brief period of two years last past the commercial diplomacy of the Department of State has been the means of gaining for American commercial and financial interests advantages in foreign fields that aggregate a valuation of $120,000,000, conservatively estimated.

This greatly increased activity of our foreign service would have been impossible were it not for the reorganization of the departmental system carried out two years ago by Secretary Knox and Assistant Secretary Huntington Wilson. Four politico-geographical divisions were created and experienced and capable men from the two branches of the foreign service were detailed to serve in them, thus giving the department the benefit of experts familiar with the conditions in each group of countries embraced in the respective divisions. From time to time these men return to the foreign field and are replaced by others.

The Bureau of Trade Relations was greatly enlarged and strengthened by the addition of two commercial advisers, both capable men of mature experience in the exploitation of foreign and domestic trade and whose extensive travels abroad had familiarized them with commercial conditions in foreign countries.

In recognition of the valuable facilities now offered by the reorganized Department of State American business men frequently visit Washington for personal conferences and to obtain advice and suggestions either at the Bureau of Trade Relations or from the experts in charge of the politico-geographical divisions. I am sure that you will all agree with me in the opinion that the country has no cause to regret the liberality of Congress two years ago which has enabled the Department of State to embark on its present policy of aiding the trade expansion of the United States.

PROMINENT IN PAN AMERICAN AFFAIRS

AS has often been stated in the columns of this publication, it is proposed to include under the heading of "Prominent in Pan American Affairs," not only those who have gained prominence through their activities in fostering closer relations between their country and the United States, but also those whose endeavors have extended over a broad expanse of Latin America and who have bent their best energies in developing closer ties of commerce and comity between all the American Republics. In harmony with this policy, it is gratifying to include among the portraits and biographical sketches published in this issue that of Gen. Ignacio Andrade, the envoy extraordinary and minister plenipotentiary of Venezuela to Cuba, and Señor Don Rafael J. Fosalba, the envoy extraordinary and minister plenipotentiary of

(Photo by Harris-Ewing.)

GENERAL IGNACIO ANDRADE.

Minister of Venezuela to Cuba.

Uruguay to Cuba. Both of these diplomats have been associated in various official capacities in their respective countries and abroad, and are doing much toward promoting friendly intercourse and good understanding between their own country and those to which they are accredited.

Gen. IGNACIO ANDRADE, at one time President of the Republic of Venezuela, is now one of the diplomatic representatives of his country. He holds the position of envoy extraordinary and minister plenipotentiary of Venezuela to Cuba, and while on his way to the legation at Habana, passed through the city of Washington. Here he honored the Pan American Union with a visit, took pleasure in meeting the officers and members of the staff of the institution, and displayed a keen interest in the work of this organization as well as a delight in the beautiful building and surroundings of the Union.

SEÑOR DON RAFAEL J. FOSALBA.

Minister of Uruguay to Cuba.

Sr. Don RAFAEL J. FOSALBA, the minister of Uruguay to Cuba, has attained prominence and position in Latin-American circles through his constant attention and interest in promoting the social and commercial intercourse between the Latin-American Republics.

On October 7, 1911, Sr. Fosalba was officially received by the President of Cuba as envoy extraordinary and minister plenipotentiary of the Republic of Uruguay. In 1903 Sr. Fosalba was named consul general to Cuba, and in 1905 his consular jurisdiction was extended over Porto Rico, Haiti, Dominican Republic, Jamaica, and the Lesser Antilles. The following year he was designated secretary of the legation at Cuba, in addition to his consular position, and soon after was made chargé d'affaires of Uruguay at Habana. This position he held for five years, when he was promoted to the high position of minister plenipotentiary.

DR. ANGEL R. HIDALGO Z.,

Consul General of Ecuador at San Francisco, Cal.

Dr. Angel R. Hidalgo Z., for many years prominent in the public service of Ecuador, has recently been elevated to the position of consul general of his country at San Francisco, California. In this new position Dr. Hidalgo will be afforded ample opportunity to make use of those remarkable qualities which have won for him such an important place in his native country. His long training as a lawyer and his many years' experience in various public offices of Ecuador have enabled him to learn thoroughly the official and commercial relations existing between his country and the United States, and should prove of much value in his efforts to develop still closer the social, commercial, and official intercourse between these two countries. Dr. Hidalgo is a member of an old distinguished Ecuadorean family, and has received a broad and liberal education. As a noted lawyer he practiced his profession for many years at Guayaquil, the commercial metropolis of Ecuador, and enjoyed a wide, as well as lucrative, clientele. Among the public offices which he held was that of member of the Chamber of Deputies from the Province of Guayas; for two terms he was municipal councilor of the city of Guayaquil, and for four years member of the National Senate, which position he left in order to represent his country in the present capacity.

(Photo by Harris-Ewing.)

WILLIAM HENRY ROBERTSON.

United States Consul General at Callao, Peru.

William Henry Robertson, United States consul general at Callao, Peru, was born in Botetourt County, Virginia, June 26, 1863, but his present legal residence is in Richmond, Virginia. He received his elementary education through private tutors, attended private schools, and later entered the University of Virginia. On leaving college, Mr. Robertson was engaged in business in the District of Columbia for several years when, in 1885, he was appointed commercial agent at Moncton, New Brunswick. The following year he was transferred to Yarmouth, Nova Scotia, and two years later, 1888, he was detailed to a similar post at Port Hope. The next year Mr. Robertson was promoted to the position of United States consul at St. Gall, Switzerland, which post he held until May 5, 1891, when he retired from the consular service. On June 8, 1893, he again entered the service, this time as consul at Hamburg, and filled this position until 1897, when he again retired. Mr. Robertson later accepted an appointment as consular agent at Arnprior, Ontario, and once more retired to associate himself with a financial concern conducting business in New York and Washington. In 1907, after formal examination, Mr. Robertson reentered the consular service at Gothenburg, Sweden. Two years later he was elevated to the position of consul general at Tangier, Morocco, and on May 2, 1910, he was transferred to the consulate general at Callao, Peru, of which post he is now the incumbent.

(Photo by Harris-Ewing.)

WILLIAM E. ALGER,

United States Consul at Mazatlan, State of Sinaloa, Mexico.

William E. Alger, United States consul at Mazatlan, State of Sinaloa, Mexico, was born in Boston, Massachusetts, September 1, 1856. He received his early schooling in the public institutions and graduated from the English High School of that city. He was appointed consular agent at Puerto Cortes, Honduras, in 1891, and in 1902, he was promoted to the position of consul at that post. Two years later Mr. Alger was transferred to the post of consul at Tegucigalpa, the capital of Honduras, where he remained for five years.

He was then again placed in charge of his former consulate at Puerto Cortes for a brief period, when he was transferred to his present position at Mazatlan, State of Sinaloa.

Alexander V. Dye, the United States consul at Nogales, State of Sonora, Mexico, was born in Flora, Illinois, February 11, 1876. For his early education he attended the public schools of Kansas, the Southwest Kansas Business College, and also received private instruction in languages. Mr. Dye graduated from the William Jewell College, obtaining the degree of A. B. in 1901 and of A. M. in 1902. He then pursued some graduate work at the Chicago University, and later traveled abroad, studying at the University of Leipzig. From the latter institution he received the degree of Ph. D. in 1904. On returning to the States, Mr. Dye became professor in William Jewell College, and taught there until 1909, when, after formal examination, he was tendered the position of consul at Nogales. This position he has held since.

(Photo by Harris-Ewing.)

ALEXANDER V. DYE,

United States Consul at Nogales, State of Sonora, Mexico.

Lewis Wardlow Haskell, the United States consul at Salina Cruz, State of Oaxaca, Mexico, was born in Pastoria, Arkansas, December 2, 1868, but now claims Columbia, South Carolina, as his legal residence. After attending elementary schools he entered the South Carolina Military Academy, from which he graduated in 1889. For the next three years he was instructor at the branch college of the University of Georgia, and later took up the study of law at the Georgetown University Law School, receiving the degree of LL. B., from that institution in 1894. From 1894 to 1901 Mr. Haskell was clerk in the office of the railway commissioner, Department of the Interior. Terminating his service with the department, he engaged in the practice of law at Columbia, South Carolina, and for 10 years enjoyed a lucrative practice. During this time he was appointed referee in bankruptcy, had the distinction of being twice elected to the house of representatives of South Carolina, and served as lieutenant and later as lieutenant colonel of the National Guard of South Carolina. In January, 1910, he was tendered the position of consul at Salina Cruz, after formal examination, which post he accepted and is filling to-day.

LEWIS WARDLOW HASKELL,

United States Consul at Salina Cruz, State of Oaxaca, Mexico.

GENERAL TARIFF LAW OF BOLIVIA

THROUGH the courtesy of Sr. Don Ignacio Calderón, minister of Bolivia, the Pan American Union has secured a copy of the modifications of the general tariff law of Bolivia, affecting both the appraisement schedules and the rates of duty, enacted by the Bolivian Congress on February 4, and approved and promulgated by President Villazon on February 16, 1911.

The tariff modifications have application to the general tariff act of December 31, 1905. A translation of this law was published in the MONTHLY BULLETIN of the International Bureau of the American Republics, now the BULLETIN OF THE PAN AMERICAN UNION, for June, 1906. It comprises over 2,800 paragraphs in the general schedule and nearly 800 additional paragraphs in the drug and chemical schedules.

The modifications made by the last Congress include besides a revision and simplification of the "Rules for application of the tariff," changes affecting about 250 of the paragraphs. Embodied in this revision are all amendments made since the passage of the original act in 1905. On the whole there are no very radical changes. In some cases there are increases in either the appraisement or the rate and in other cases there are decreases, or the article is made duty free.

It is the purpose of the Pan American Union to publish a new translation of the Bolivian tariff as amended, the publication to include both the Spanish and English text and an index with cross references on the plan of the Argentine tariff recently published. The edition will be in pamphlet form and will be ready for distribution in about two months. It will be sold at a small price sufficient only to cover the cost of printing.

With no other country in South America has the trade of the United States in recent years increased so rapidly as with Bolivia, particularly imports of Bolivia from the United States. Ten or 15 years ago American goods were almost unknown in Bolivia, and even in 1904, when the trade had assumed some considerable proportions, it was only 1,080,620 bolivianos, or about $432,000. In 1910 it was 5,501,296 bolivianos, equal to $2,200,518—more than five times what it was in 1904.

Bolivia is a country of enormous resources, the third in area of the South American Republics, and are able to support a great population. What with recent railroad extensions—completed, in construction, and projected—growing agricultural, mining and forest industries, this progressive Republic is truly at the beginning of development on a scale to be compared only with that which for the last 15 or 20 years has been in progress in the sister Republic of Argentina.

LATIN AMERICA IN THE MAGAZINES

" **The Arica-La Paz Railway.**" In *The Engineer* (London) of November 3, 1911, we note a comprehensive article by Percy F. Martin, giving details of one of the great engineering feats of the century, the construction of the Arica-La Paz Railway.

Just three years ago, in its December, 1908, issue, THE BULLETIN published an article entitled "The Arica-La Paz Railway as Proposed by the Chilean Government," in which were outlined the route selected, the difficulties met with by the engineers in surveying of the route, the various gradients of the road, the bases upon which bidders for the construction of the railway were asked to compete, and other interesting details of this great work, then only contemplated.

Mr. Martin has recently traveled over the greater portion of the line under construction, and although much has been published relative to the undertaking since its beginning, his account gives such a succinct statement of the history of the work from its inception to the present—when it is within three months of its completion—that THE BULLETIN takes occasion to give more of a reproduction than a review of his excellent article.

Arica, the port from which the line starts, is one of the best ports upon this part of the South American Pacific coast. While its natural advantages are great, nevertheless it is quite capable of improvement, and with the completion of the railway there is every reason to believe that the necessary construction to make Arica one of the leading ports of the Pacific will be undertaken * * *.

It was on August 14, 1905, a little less than a year after a fresh treaty of peace and friendship between Chile and Bolivia had been signed, by the terms of which Chile undertook to pay for the construction of a railway to connect the capital of Bolivia (La Paz) with the port of Arica, that tenders were called for. Five months elapsed, however, before such tenders, which amounted to four in number, were opened in Santiago de Chile—that is to say, on the 2d of January, 1906. Previous to that, namely, in November of 1904, a proposition had been submitted to Congress by Mr. Mateo Clark, upon behalf of a British syndicate, which was willing to carry out the construction of the said railway under a concession granted with a 5 per cent guaranty upon the amount of capital invested. The Government, however, decided to call for tenders for cash payments, since it had undertaken to hand over to the Government of Bolivia the Bolivian section of the railway free of charge after the expiration of 14 years.

As stated, there were four tenders submitted—one by a German firm under the auspices of the Deutsche Bank of Berlin, two by local contractors, and one by Mr. Mateo Clark, in London. After considerable delay the Chilean Government decided to accept one of the local tenders, viz, that of the Chilean Public Works Syndicate. Construction was commenced shortly afterwards, but when 40 miles of line had been laid, work was stopped for want of money. Fresh tenders were once more invited, and upon this occasion the Government entered into an agreement with the Deutsche Bank to carry out the work, an agreement, however, which was not approved by Congress on account of the rigorous terms which it involved.

For a third time tenders were called for, but finally the contract, with certain modifications, was awarded to Mr. Mateo Clark, on behalf of a British construction syndicate, which had been organized under his auspices and in which a prominent part was taken by Sir John Jackson, of London, the well-known contractor for port works, and Mr. John Norton Griffiths, the South African contractor.

The Government took advantage of the opportunity afforded to insist upon the construction of the line by a new route, one which had been approved and actually commenced. This stipulation was agreed to by the contractors, and the definite contract was signed and approved by decree, dated 1st of May, 1909. No time was lost in getting to work, and Sir John Jackson and Mr. Norton Griffiths arrived in Chile with a staff of engineers and took over the work in June, 1909. The original tender by the British company was for £2,950,000 (about $14,337,000), but owing to the fact that the new route was considerably easier a reduction was agreed upon, and after allowance was made for the work already done by the other contractors and the Government, the final contract price was reduced to £2,450,000 ($11,907,000).

A decidedly bad impression was created in the minds of the contractors and engineers after visiting the route, because, even in their great experience, it was difficult to imagine a more intricate and more perplexing country for setting out a reasonable line, and this in spite of the fact that the schedule of conditions permitted of the use of ordinary adhesion up to 3 per cent and rack up to 6 per cent gradient.

Starting from Arica, the first 30 miles of the line, which have been constructed by the Government, were of the easiest possible nature. Then followed some 12 miles of more or less heavy hillside cuttings and embankments, after which the top of the first range hills was reached, and at this spot, at an elevation of 5,000 feet, the principal construction encampment was established. From this point to the summit the ground is very much broken, there being a labyrinth of hills with rounded tops of volcanic origin and absolutely arid. Besides the difficulty of the broken ground the engineers had to deal with another drawback—the steepness of the ascent, a great obstacle, notwithstanding the fact that they were authorized, as above stated, to use the rack up to 6 per cent gradient. The steepness of the gradient can be appreciated when it is said that in 25 miles from the first encampment the line rises 3,610 feet to a height of over 8,600 feet.

In view of the broken nature of the country, some idea of which will be afforded by the accompanying illustrations, the line had to be carried from spur to spur, passing in some places through tunnels, while in others it was placed in deep open cuttings, generally in hard rock, and in several instances crossing the ravines by very high embankments.

The length of rack line on the Arica-La Paz Railway is approximately 28 miles, the total length of the line being 267 miles. The highest level reached is 13,986 feet, at a distance of 112 miles from Arica and 155 from Alto de la Paz, Bolivia. La Paz, which is the capital of Bolivia, is at present connected with the seaboard by two different routes—the Antofogasta & Bolivia line, which is 711 miles in length and the (Peruvian) Southern Railway (Mollendo-Arequipa section), which is 531 miles in length.

So far as actual construction is concerned, all the difficult work has been confined to the section between kilometer 70 and kilometer 130. The Bolivian section has called for comparatively little heavy work and this was completed sometime ago. The plant and material were shipped by the Mollendo-Arequipa and Lake Titicaca route to Viacha at a very heavy cost in order to gain time.

THE MORO AT ARICA.

The earthworks for the whole line were completed in June last, and according to the latest mail advices the only important work remaining to be done in order to complete the railway is some 60 miles of rail laying, the erection of a few bridges, and the construction of the main station at Arica. It is thus confidently believed that by January, 1912, the first locomotive will be able to run over the whole line from Arica to La Paz and that the road will be open for business by March.

Attention has been drawn to the fact that the rack system has been introduced upon the steeper portions of the line found on the Chilean section. The total length of rack, which is constructed on the two-plate Abt system, is about 40 kilometers, without break and upon 6 per cent maximum grade, which in all probability constitutes the longest stretch of rack railway which as yet been constructed in any part of the world.

"**Weizenbau in Peru**," by Von O. Sperber, in the German publication *Der Tropenpflanzer*, devoted to tropical agriculture, is an article which deals in a most interesting manner with the introduction and subsequent history of the wheat industry in Peru. Mr. Sperber tells us of the accidental introduction in two instances of a few grains of wheat into the country, both occurring in the same year, 1535. It seems that Sr. Francisco Martin de Alcantara received a barrel of rice from Spain and among the grains of rice Doña Inés Muñez, wife of the recipient, found a few wheat grains. These she carefully collected and subsequently sowed in her garden.

With great care she then nursed the few resulting plants and from these in turn came the larger quantity of seed which served for the second crop. About the same time another Spanish lady, Beatriz Salcedo, received a shipment of flour from Spain, in which she found a few grains of wheat, and she, too, showed the wise forethought and thrifty care of the Spanish women of Peruvian viceroyalty times and also started the cultivation of wheat from this very small beginning.

The remarkable increase from these few grains planted by these two ladies was so rapid that mills were erected in Cuzco in 1539, in Charcas in 1541, in Arequipa in 1545, in Cajamarca in 1547, etc., showing how well adapted to the cultivation of the grain was this virgin soil. The industry continued to grow until in 1621 the Government began to export the surplus to Guayaquil and to Panama.

The success of the culture of wheat has received a temporary blow in the development of a fatal disease in the coast sections affecting the grains before they ripen. In the higher altitudes, however, it is successfully grown, but not in quantities sufficient to supply the demand of the country, and hence Peru imports both wheat and flour.

"**The Port of Manzanillo,**" in *Cassier's Magazine*, by Harry H. Dunn, is a detailed and comprehensive description of this magnificent port upon which the Mexican Government has expended $8,000,000 silver and where $6,000,000 more is to be spent in improvements of wharves, slips, building of huge warehouses, and other conveniences for traffic coming from the west.

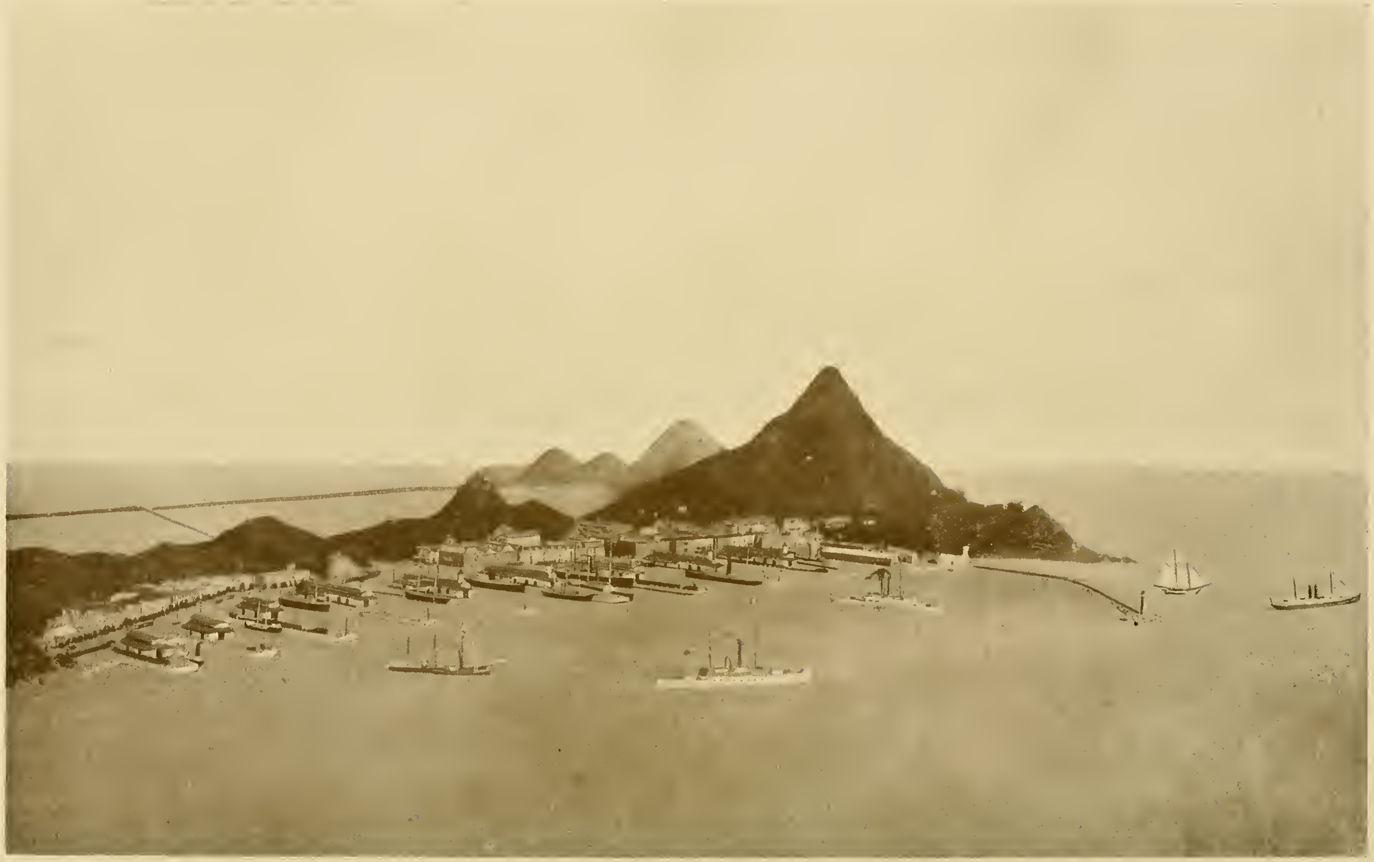
THE BULLETIN published an account of the port improvements going on at Manzanillo three years ago, giving the salient features of the work that had been then done and that contemplated.

Manzanillo is a halfway station between San Francisco and Panama, and its location is such that the opening of the Panama Canal will undoubtedly stimulate its commercial activity to such an extent that it will become one of the great ports of the world.

The most striking feature of the improvements is the breakwater, and the following description by Mr. Dunn is comprehensive:

> On March 17, 1900, the formal inauguration of the improvement was held. The breakwater was the first consideration, and what to-day stands as a triumph of engineering skill and constructive genius was steadily pushed out from the projecting headland at the southwestern end of the bay.
>
> Thousands of tons of stone, cut in various sizes, were quarried and deposited along the line marked out for the breakwater. Gradually there rose from the waters of the Pacific, from a base 315 feet in width, a solid mass of rockwork, absolutely impregnable to the action of the ocean waves.
>
> The breakwater is 26 meters in height, tapering from the wide base above noted to a crown 8 meters in width. In length it extends 441 meters out into the sea, and is so constructed that it presents an oblique face to the waves, the most direct and powerful of which strike it at an angle of about 36 degrees from the normal incidence.
>
> It also serves as a permanent defense against the sands which formerly entered and choked the port from the coast line to west and south.
>
> Probably the heaviest blocks of granite ever placed by the hands of man were those brought from the Colomo quarries and laid in this breakwater. These monoliths, now capping the outer surface of the Manzanillo breakwater, weigh from 30 to 60 tons, and when transported from the quarries to the port each block formed a carload.
>
> Below these masses of granite the outer slope is capped with 30-ton blocks of concrete, made from the best materials obtainable and in accordance with the terms of the contract, which were very specific in details as to just how these artificial stones were to be made. These blocks were among the most expensive factors in the construction of the entire breakwater.
>
> The interior slope is capped with granite and concrete blocks weighing from 5 to 15 tons each. The crown is a solid deposit of concrete, weighing more than 60,000 tons. This cap forms a monolith 4 meters high and 8 meters wide, and extends for the entire 441 meters of length of the breakwater.
>
> Greatly exceeding in depth and width the famous sea walls of Cherbourg and Plymouth, no finer or more effective protection for a harbor was ever designed or carried out than the Manzanillo breakwater. It is one of the most important and serviceable works of its kind ever constructed.

The sea walls for the town were then built and have a total extension of over a mile. They have been built 3 meters above the line of mean tide, and are of the most sub-

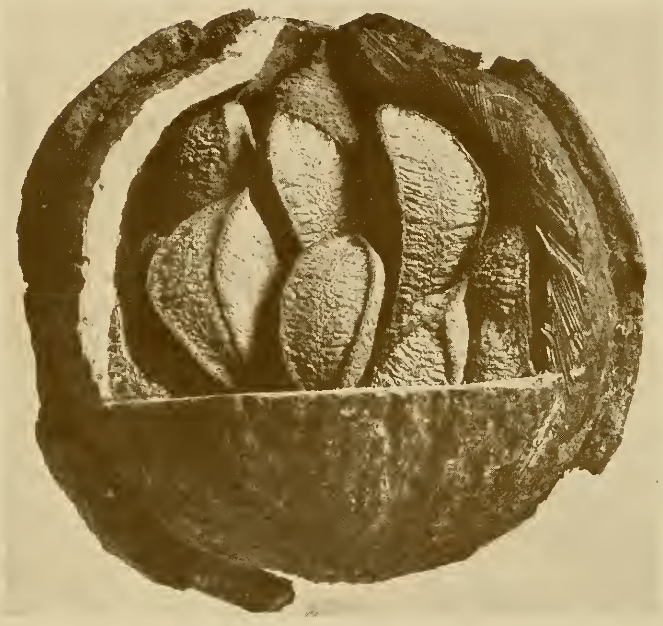


Courtesy of Popular Mechanics.

VIEW OF THE COMPLETED PORT OF MANZANILLO.

The breakwater together with the sea walls has enabled the reclamation of 30,000 square meters from behind the sea walls, by the depositing of coral and other material dredged from the bottom of the bay. A uniform and valuable piece of water front has thus been saved for the building of wharves and warehouses for the extensive trade which is already beginning to pour into Mexico through this port.

stantial construction, protected on the outer slope by blocks of granite weighing from 5 to 15 tons each. The protected area now inclosed covers more than 165 acres, and plans are now contemplated which provide for the extension of the present breakwater for a distance of 200 meters farther into the sea, thereby increasing the protected area to 319 acres. The draining of the Cuyatlan fresh-water lagoon has made the town a healthy place for residence, while the plans for the further improvement of the port include a perfect drainage system for the town and the installation of modern water works, the water being brought from the Sierra Mountains.



(Illustrations through courtesy of the Botanical Gazette, Chicago.)

THE BRAZIL NUT.

Showing the pyxidium of Brazil nut cut open to show structure within and nuts in place. Some idea of the commercial importance of this product may be had when we note that the exports of these nuts from Brazil alone in 1910 amounted to a total of 210,738 hectoliters (hectoliter equal to 2.84 bushels) valued at $1,408,286. Of this amount the United States took 145,954 hectoliters or $996,462 worth.

"**The Rubber Industry in Peru,**" by Dr. Emilio Castre, is the title of a most comprehensive paper on this subject in the October issue of *Peru To-Day*. The paper was read by Dr. Castre before the Second International Rubber Exhibition in London, at the July 11 session, the doctor being the official representative of the Peruvian Government.

The paper deals with the many details of the rubber industry as it is carried on in Peru, beginning with the physical characteristics of the country, its peculiar adaptability to the growth of the rubber trees in its topography and climate, the many varieties of trees found, methods of extraction or tapping of the trees, methods of coagulating the latex obtained from these different varieties, amount produced, manufacture and packing, and concluding with a general survey of the situation as to the future of the extracting industry in Peru.

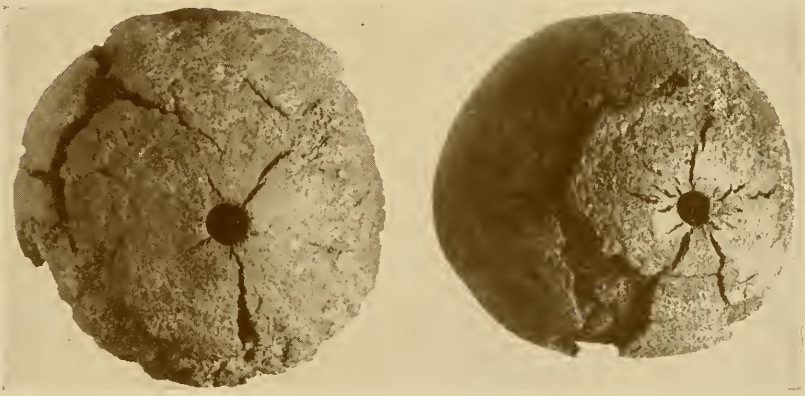
Among the many other interesting features of this issue of *Peru To-Day* is an account of "The Hispanic Society of America," and its fine home, containing the library and

A RUBBER GATHERER

museum, located in Audubon Park, New York City. Exterior and interior views of this artistic building illustrate the excellent article written by A. M. Jungman.

Under the Book Reviews department of the publication appears a most appreciative review of Dr. Mozans's latest work, "**Along the Andes and Down the Amazon,**" an excerpt from the first chapter of which, descriptive of the City of Panama, is given in the Panama section. Another descriptive article is "**Mining in Panama.**"

"**The Brazil Nut**" is an article by W. J. Young, published by permission of the Secretary of Agriculture in the September number of *The Botanical Gazette* (Chicago). Since this nut forms one of the staple articles of commerce in some of our Latin-American countries we deem the question as to its exact source, from a botanical point of view, of sufficient interest to the average reader to reproduce excerpts from this rather technical article.



PYXIDIA OF BRAZIL NUTS.

These show characters which identify them with *Bertholletia Miers* (*B. nobilis*), particularly the circular openings after the opercula have fallen into the interior of the pyxidia. Opposite these openings is the "tampa" or lid, which usually bursts from the pyxidium when it falls and scatters broadcast the ten to twenty nuts so neatly packed within it. In the Amazon basin exist large tracts of land so thickly covered with these trees that there is quite an element of danger in the collection of the nuts. The trees grow to a height of 100 feet or over, and the pyxidium—being a "bombshell" 7 inches in diameter and loaded with nuts—would easily crush a human skull were it to fall on it from such a height.

The genus Bertholletia, to which is assigned the Brazil nut of commerce, was established in 1808 by Humboldt and Bonpland, who placed it in a single species, *B. excelsa*. A translation of Bonpland's description of the fruit of this species is as follows:

"Fruit a spherical, compound nut the size of a child's head and often larger, divided internally into four cells, each of which incloses several nuts; covered on its exterior with a husk of a green color, smooth and shining.

"Main nut very solid, rough and marked by branching furrows on its outer surface, 6 lines (1 cm.) thick, divided internally into four cells by as many membranous dissepiments which become obliterated in part or entirely after the maturity of the fruit, but of which there always remain traces."

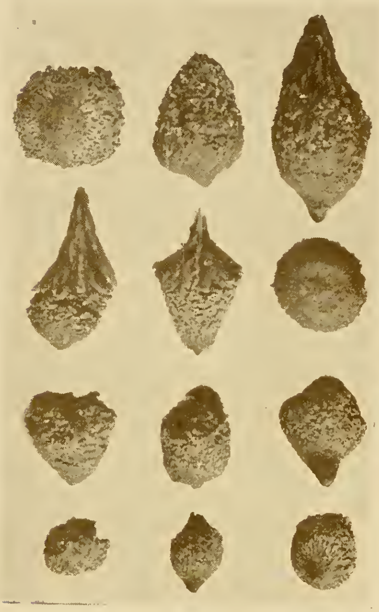
The tree is described as 33 millimeters high, with a trunk 9 decimeters in diameter. Leaves alternate, oblong, subcoriaceous, 1 decimeter broad and 6 decimeters long, borne on short petioles. Type locality Rio Orinoco.

For more than half a century after the publication of Bonpland's description of *B. excelsa*, the genus was accepted as monotypic. Evidence was gradually accumulated, however, which led to the recognition of a second species. Among the later botanists to contribute to this end may be mentioned Berg, who in monographing the Brazilian Lecythidaceæ described under *B. excelsa* a species distinct from that of Humboldt and Bonpland. Although Berg's description is marred by several errors, it is sufficiently accurate to demonstrate that the species described is not the *B. excelsa* of Bonpland. Berg's drawing of the fruit or pyxidium is, moreover, quite different from that of Bonpland.

It remained, however, for Mr. J. Miers to point out clearly the distinction between the two plants and to describe Berg's species under the name *B. nobilis*.

The author here gives a paralleled description of the two species, *B. excelsa* and *B. nobilis*, which brings out the more noticeable points of distinction very strikingly and convincingly. He then quotes many standard authorities, such as leading dictionaries, encyclopedias, and even Government publications, which have apparently accepted the idea that *B. excelsa* is the source of commercial Brazil nuts, accounting for this erroneous impression by the fact that Miers's work must have been overlooked by persons interested in botany from the economic standpoint. He continues:

> After making a careful study of the situation, the writer has become convinced that the commonly accepted view is erroneous, and that the Brazil nuts of commerce are derived from *B. nobilis* Miers and not from *B. excelsa* Humb. and Bonp. The reasons for this view are given below.



OPERCULA FROM BRAZIL NUTS.

The nuts as we know them are contained in a spherical shell—the pyxidium—which is attached to the branch of the tree by a short stem which withers gradually as the fruit ripens. These opercula are often found mixed in with the nuts and vary in form from ovoidal bodies to cones of varying slope but all provided with distinct apical points, except when these have been broken or ground off against the nuts in shipment.

> 1. Commercial samples of Brazil nuts contain, in larger or smaller numbers, opercula derived from the fruit, and the presence of these is in itself evidence that the nuts were derived from *B. nobilis*, since, as has been noted in the comparison the opercula fall from the mature pyxidia of *B. excelsa*, and hence would not find their way into samples of nuts from that source. On the other hand, their presence among nuts from *B. nobilis* is perfectly normal and what would be expected, since in this species the opercula fall into the interior of the pyxidia and become mixed with the nuts. Moreover, the opercula, so far as the writer has been able to observe, are always of the *B. nobilis* type, as shown in figure 3. They vary in form from ovoidal bodies to cones of varying slope, being modified apparently by the size and degree of persistence of the columella, as well as by the extent of the grinding against surrounding nuts to which they have been subjected during shipment. All, however, are provided with a distinct apical point, except where it has been broken off, in which case the fact is usually quite evident.
>
> 2. Every pyxidium of the Brazil nut which the writer has had an opportunity to examine has indicated that the fruit is that of the *B. nobilis*. Their main points of structure are well shown in figure 2 which illustrates pyxidia obtained from different sources * * *. Most, if not all, of the pyxidia which the writer has examined were brought to this country by the importers of Brazil nuts and represent the source of the nuts in which they deal.
>
> 3. The testimony of others, although comparatively scanty, should not be overlooked, since it is improbable that the authorities quoted as stating that the Brazil nut is the seed of *B. excelsa* have given the matter any exhaustive study. After this description of *B. nobilis*, Miers states "these seeds are known in commerce as Brazil nuts," and proceeds to give statistics regarding their exportation and use. Moreover, Berg's error regarding *B. excelsa*, although perhaps adding to the confusion, is in reality indirect evidence of the same fact, since it is doubtful whether he would have confused the two species had he not been sure that the specimens from which he made his description were those of the Brazil nut, which he, in common with others of his time, regarded as *B. excelsa*.

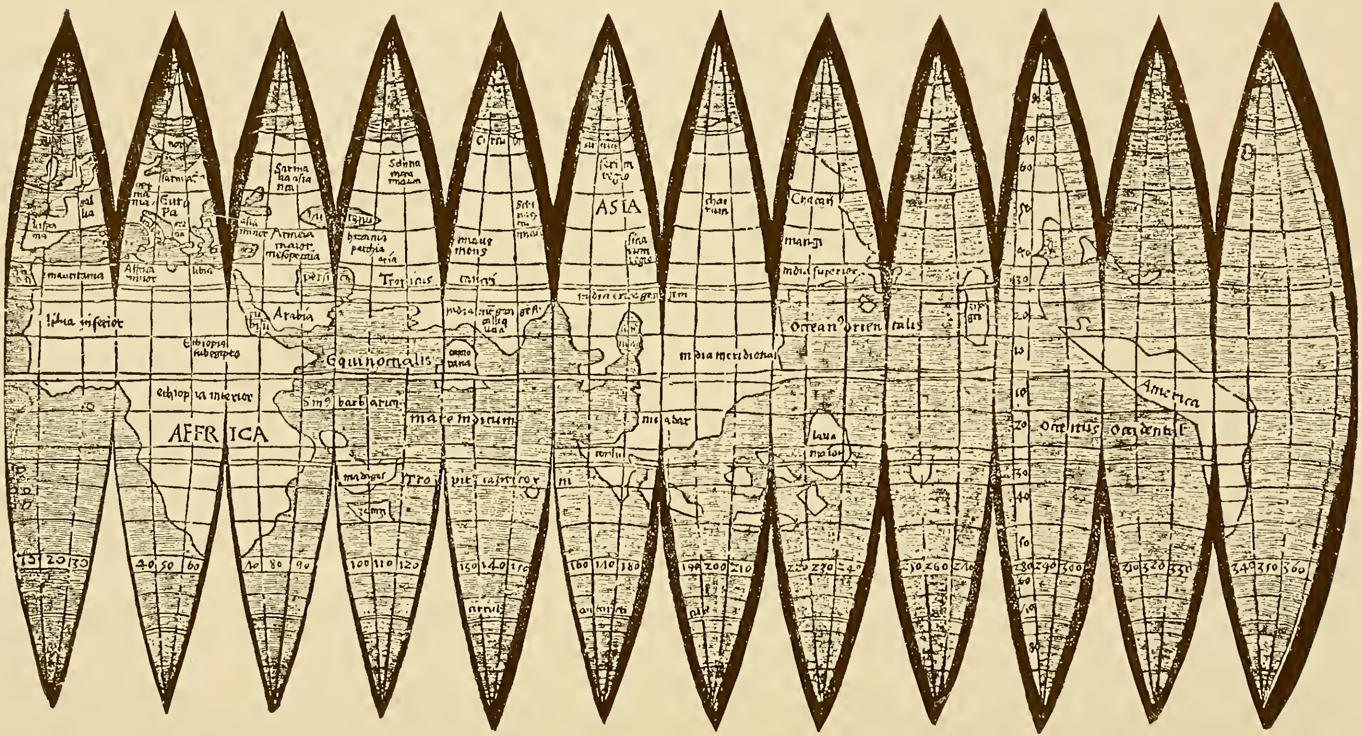
The following note is appended to the article:

> NOTE.—Acknowledgment is due Mr. H. C. Skeels, of the Office of Foreign Seed and Plant Introduction, United States Department of Agriculture, who has reviewed the work and confirmed the conclusions of the writer.

"**Ancient America, by an Archæologist,**" in the November number of *The Theosophical Path*, is an interesting summary of recent discoveries and publications relative to the ancient civilization of the Western World.

After commenting at some length on THE BULLETIN's recent article—"Ancient Temples and Cities of the New World"—in which the comprehensive description and illustration evidently appealed to the *Archæologist*, he gives the following excellent résumé of recent additions to archæological lore:

> This subject of ancient America has not yet received from archæologists the attention it deserves. Nevertheless there are explorers who study in this field, and the results of their researches are frequently written up for the Sunday editions. In this way the public gets acquainted with the subject independently of academical instruction. Such periodicals as the *National Geographical Magazine* and *Records of the Past* often give beautifully illustrated accounts of the ruins.
>
> Thus we read that Dr. Max Uhle, director of the University of California's archæological work in Peru, has discovered that a great civilization flourished at least 2,000 years before the Incas, and that a highly cultured race was in existence in Peru before the Trojan war.
>
> In Guerrero, Mexico, in a region south of the Balsas River, over an area of 50 square miles, there are remains of thousands of prehistoric dwellings and scores of pyramids. The sculptured tablets bear the usual mystic geometrical symbols of the ancient science of life.
>
> A mining engineer, Mr. A. Lafave, is reported to have discovered in Arizona a prehistoric city older than Babylon or Nineveh, but nevertheless the center of a civilization very highly advanced. Great architectural skill is shown, and the symbol of what is called a sun god was found.
>
> The British Museum recently acquired the collection of pottery and other relics discovered by Mr. Hubert Myring in the Chimcana Valley of Peru, and stated by him to be, at the lowest estimate, 7,000 years old. Yet this pottery shows the highest possible degree of skill, while the subjects represented prove that the artists had the materials of a highly cultured and complex civilization to draw upon.
>
> In Ecuador Dr. Marshall H. Saville, of Columbia University, discovered many tombs, and the objects collected show that the district was densely populated by a highly civilized people.
>
> Writing from New Orleans, May 13, Charles F. Lummis, of Los Angeles, records his excavations at Quirigua, Guatemala. A trackless jungle had to be cleared and numerous monuments of heroic size were found; one was 26 feet above ground and 16 feet below and weighed about 140,000 pounds. The greatest discovery was a palace which must have been magnificent. It was surrounded by columns and the frieze was covered with carved heads.
>
> The ruined temples of Palenque, Uxmal, Chichen Itza, etc., have often been described. The mysterious hieroglyphics of the Mayas have yet to be deciphered; and when they are we shall have another epoch-making revelation like that following the deciphering of the Egyptian hieroglyphics by Champollion.
>
> The mention of hieroglyphics yet undeciphered, which may any day prove the key to a new revelation of history, receives apposite illustration in an article in the Los Angeles Times for May 14. This describes the discovery of several cylinders, resembling the clay cylinders of Babylonian civilization, which have been deciphered; and it is thought that these may prove the Rosetta stone of American Egypt. They are about 3 inches long by 1½ inches in diameter, hollow, the walls ¼ inch thick. The clay has turned to stone, thus being preserved, and the inscriptions repeat hieroglyphs known to correspond to familiar phrases.
>
> The account in which this occurs is that of a discovery made by Prof. William Niven, a field archæologist of Mexico City; and his statements as to the age and value of his finds are confirmed by Dr. Edward E. Seler, head of the National School of Archæology of the Republic of Mexico. The latter authority declares the ruins and relics to be the evidences of a civilization new to archæology, though bearing some resemblance to the ruins of the Tigris and Euphrates. This center of civilization lies about 40 minutes' ride from Mexico City, under the suburb of Azcapotzalco.
>
> It is 18 feet beneath the surface, and from it have been produced pottery of a type different from any hitherto found in Mexico, an entire goldsmith's outfit with patterns and molds for the making of ornaments of gold and silver, pendants and rings and beads of jade, copper knives which cut like steel, skulls containing teeth, whose cavities are filled with cement and turquoise, the cylinders just mentioned, and many other objects.
>
> These things were found in an immense basin containing the ruins of a city some 10 miles long by 3 or 4 miles wide. Its houses were of laid stone, cemented with a white cement, unlike the black cement of Mitla or the gray composition of Palenque. The rooms were of uniform height—9 feet; the floors of tile or rather, of small squares of cement, colored and traced in beautiful patterns; the walls ornamented with frescoes and friezes, showing a remarkable development of the color art. Paints used on these buildings, though evidently of vegetable composition and more than 3,000 years old, are fresh and do not fade when exposed to light.
>
> The skulls and arrowheads found in the soil above are similar to those found in other parts, and relate to peoples having no connection with the occupants of this ancient city. Does not this prove that so-called "primitive man" was merely odd tribes of lowly nomads or settlers, belonging to fallen remnants of earlier civilization; whereas many anthropologists seem to try to make out that they represent an earlier stage in evolution? This ancient city flourished long before the owners of the skulls and arrowheads. All through the period of Aztec civilization it lay buried and unsuspected by the Aztecs.
>
> The great age of this civilization is amply proved by the fact that the city was buried under the wash of a great river that came down from the mountains. Geological considerations enable us to fix the date of that river back beyond other changes that have taken place in the ground since. Hence the city must be older still. And even before this flood the city was probably already abandoned through pestilence, war, or some such cause. It was quite by accident that it was found; the exploring party chanced to step into



WALDSEEMÜLLER'S SEGMENT MAP.

This map was drawn in distinct segments which, united at their ends and fastened together, as is shown in the construction of geographic globes, gives the full outline, *in solido*, of the world as the cartographers of the early part of the sixteenth century pictured it.

a cave-in. It lies beneath the thick and long-cultivated residual soil, and consequently there may be an indefinite number of such cities almost anywhere.

Among objects found was a dental cast of a human mouth. The more we discover, the more do we confirm the teaching that civilization is not of recent growth. The older the civilization, the more advanced, this seems to be the rule everywhere. Clearly the arts of modern civilization have been known before and we are but rediscoverers of them.

Adding to this account of recent discoveries, we note the results of just the beginning of an expedition, later than any of those mentioned by the author of the above. In *The Geographical Journal*, for November, we find the following account of the work by Prof. Hiram Bingham and his party, sent to Peru under the auspices of Yale University, during the first five weeks following their arrival:

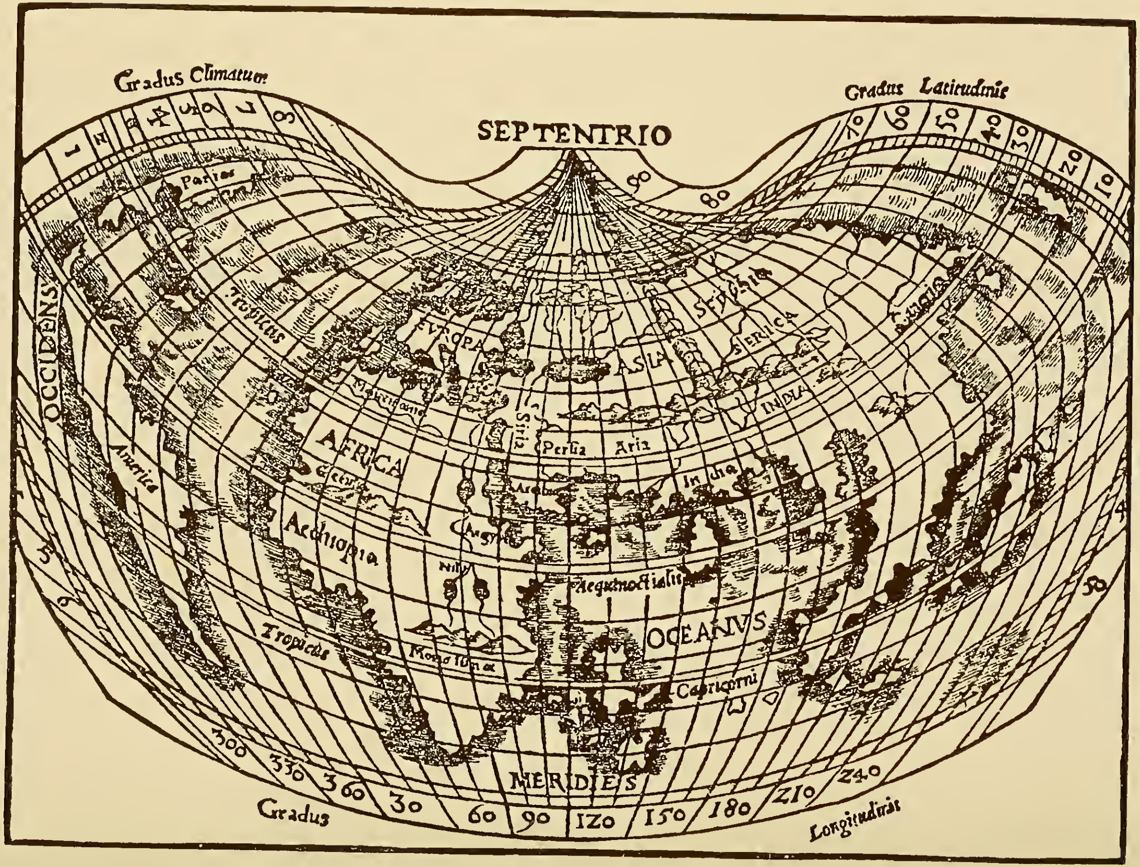
> Near Cuzco Prof. Bingham had made the interesting discovery of human bones in a deposit which, in the opinion of the geologist of the party, Prof. I. Bowman, certainly dates from the glacial period. The bones, which were covered by over 100 feet of conglomerate, gravel, sand, etc., had been partially exposed to view, owing to erosion and the cutting of a road in the side of the valley. They included three femora and one hip bone. Another important discovery was that of a ruined Inca city, placed on an almost inaccessible ridge flanked by fine precipices not far from the left bank of the Urubamba, three days journey from Ollantaytambo. Prof. Bingham says that among all the Inca cities that he has visited none even remotely approaches this in importance. The ruins are very extensive, and the stonework is as fine as any in Cuzco or Ollantaytambo. One building is remarkable for its large and beautiful windows, another for its finely worked stones—some of them 13 and 14 feet long. Prof. Bingham believes the city to have been the ancient Pitcos (Vitcos), or Pitchu, mentioned by Father Calancha and also by Ocampo. The latter says that Pitcos "is in a very high mountain * * * where there is a plaza of considerable size," and describes the buildings as "suntuosisimos de grande magestad," and built with great art. The place is now known as Machu Pichu, i. e., Old Pichu, but it is so difficult of access that no one in the neighborhood has seen it. Prof. Bingham, who had taken a number of photographs of the ruins, hoped to return shortly and spend some time making a plan of them and clearing away the jungle by which a large part is covered.

"**The Naming of America**" is the title of the leading article in the latest issue of *The Journal of American History*. The article was suggested by the recent celebration (in July of this year) in the little, but ancient, town of St. Die, France, commemorative of the naming of the New World. The author gives a brief sketch of the Gymnase Vosgien, the society which secured and translated Vespucius's Epistola, the erection in 1507 of the first printing press in St. Die and of its first product—the famous Cosmographiæ Introductio, which contained an account of the ancients' conception of the geography of the world, together with the story of the four voyages of Americus Vespucius. It was in this work that the celebrated geographer and cartographer, Martin Waldseemüller, declared that the new-found continent should bear the name of America, in honor of the explorer.

The writer then deals briefly with the finding of the long-lost map of Waldseemüller, etc. The article itself contains nothing new on the subject, but is of course interesting to those uninformed as to early accounts of the discovery and exploration of the Western World. The March, 1904, issue of THE BULLETIN contained a comprehensive account covering this same ground and we reproduce herewith one of the maps published in connection therewith.

"**Exploration of the Ibera Lagoon, Argentine Republic**," is another article in the same issue of *The Geographical Journal*. After referring to the fact that this large area has hitherto remained comparatively unknown, the article continues:

> The vote of the necessary funds by the Argentine Chamber enabled the Sociedad Cientifica Argentinat which had zealously supported the project, to organize an expedition early last year under the leadership of Lieut. Col. Pedro Uhart, for whose guidance detailed instructions were drawn up * * *. A solution of the following, among other questions, was aimed at. Does any connection exist between the rise of the Parana and the increase of lagoon water? Are there movements of water in the basin? Do traces exist in the neighborhood of an ancient bed of the Parana? What is the relative extent of open water and of reed beds, etc.? Would a drainage of the swamp be desirable? Geological, botanical, and zoological observations and collections were also to be made, and the possibilities of cultivation, acclimatization of fish, etc., were to be considered. From a statement by the president of the Sociedad Cientifica Argentina in his annual address it appears that the exploration was then approaching completion, and that an account of his operations was expected from Col. Uhart. It has not, however, appeared in any of the numbers of the *Anales* received up to the present date.



REDUCED REPRODUCTION OF WALDSEEMÜLLER'S MAP OF THE WORLD.

This map accompanied the celebrated "Cosmographie Introducto," in which the idea was first advanced that the fourth part of the world which had just been discovered should be called "America," and which was published in 1507.

"**The Egerton Map of Early American Discoveries**" is the title of an extended study of this most interesting relic of the cartographers of the early sixteenth century by Orville A. Derby in the November *Geographical Journal*. The map has been preserved in the British Museum, and was almost unknown and inaccessible until *The Journal* reproduced it in its issue of July, 1910. The authorship of the map is not yet definitely known, and Mr. Derby enters into a thorough discussion of this question as well as a study of the chronology of the early discoveries in the light of the facts deduced from his studies of this as well as the other known maps presumably contemporaneous therewith and dealing with the mouth of the Amazon and the contiguous territory.

The Survey of Colombia. The recent report of Sr. Julio Garzon Nieto, director of the office of longitudes, Colombia, published in the *Boletin del Ministerio de Relaciones Exteriores*, is full of valuable information aside from the technical details. The work originally contemplated the execution of the necessary surveys to serve as the basis for an accurate map of Colombia, and in submitting the report of these surveys Sr. Nieto includes under the narrative of the journeys a wealth of information on the geography and economic condition of the districts visited, some of which were comparatively little known.

The surveying party descended the Magdalena River to the sea, then followed the coast westward to the mouth of the Atrato, and thence across to the Pacific by the valley. From Buenaventura, after carrying out a survey of the Pacific coast, the party crossed over into the valley of the Cauca, to which the rest of the time was then devoted.

Summarizing the work briefly: Five hundred and ninety-two astronomical observations, with the associated meteorological data, were secured, as well as 652 independent meteorological observations; surveys were made of the Magdalena from Girardot to Baranquilla; of the Atlantic coast from Baranquilla to the Rio de la Miel; of the Atrato from the Boca del Leon to Quibdo; of the Rios Bojaya, Uva, Napipi, and Limon (in the upper basin of the Atrato and between this and the Pacific); of the Pacific coast from the Bahia de Limon to Panama, and of the Cauca from Cali to Cartago.

These operations were attended by much hard work and occasional danger. The party was more than once in peril while navigating along the dangerous parts of the coast or on the flooded streams between the Atrato and the Pacific. The account gives information as to the population of the towns and as to the industries carried on, the activity in planting, rubber collecting, etc., on the shores of the Gulf of Uraba. Complimentary mention of the town of Quibdo and its industries is made. While the country between the Atrato and the Pacific is as yet undeveloped, improvement in methods of communication and transportation will result in the rapid progress of this section of the country.

"**Women of America Unite for a Colossal Peace Statue at Panama Canal,**" is an article in the November issue of *The Advocate of Peace*, written by Mary E. Garbutt, which explains and advocates the movement to unite the women of America to memorialize Congress for a peace statue to be erected at the entrance to the Panama Canal.

The movement was started in Los Angeles, California, and is meeting with the approval and cooperation of many of the women's organizations throughout the country.

The following excerpt from the article serves to show the spirit behind this laudable undertaking:

> The completion of so gigantic an undertaking as the Panama Canal deserves some special and unique recognition commensurate with its importance. The building of this canal is one more achievement of civilization to bring the nations of the earth into closer relationship. Every step in this direction lays a surer foundation for that international peace and fraternity we desire to see consummated.
>
> As an educational agency in the interest of a world-wide peace, as well as to commemorate this splendid piece of work, such a statue as proposed is eminently fitting. "As the 'Christ of the Andes' has been and is an inspiration to South America, so a peace statue at the Panama Canal," writes the secretary of the World-Federation League, "will be helpful in many ways."

"**A Flying Ship in 1709,**" is the title of an article appearing in the November number of *The Open Court*, which gives a reproduction of an article which appeared in No. 56 of the Evening Post, a newspaper published in the reign of Queen Anne, and bearing date 20–22d December, 1709. The original article contained a translation of the petition which was presented to the King of Portugal in behalf of the supposed inventor, a Brazillian priest by the name of Father Bartholomew Laurent, in which the description of this curious flying ship and its probable uses are set forth. Although the description and accompanying picture of this imagined vessel conclusively shows how vague and impracticable were the ideas of aviation at that time, the account is interesting, inasmuch as it demonstrates that the question of conquering the air was being seriously considered in Brazil over 200 years ago.

"**Campos de Petroleo en Mexico,**" by R. B. Estrada, is an illustrated descriptive article dealing with the oil fields in Mexico, the stimulating effect upon the exploiting companies of the anticipated early opening of the Panama Canal and the consequent demand for oil for fuel for the passing ocean vessels, and giving details of the production of some of the larger oil companies now in Mexico. It appears in the Spanish *Ingenieria*, for October.

"**Republic of the United States of Brazil,**" is the title of an article in the South American supplement of *The London Times*, which deals exhaustively with the sugar industry in Brazil. It traces the industry from the time that steam was introduced as a motive power in Pernambuco, in the several sugar factories, down to the present, when the latest methods of cultivation of the cane and the most up-to-date scientific invention relating to the industry have been adopted in this section of Brazil. Statistical tables relative to the cultivation and yield are given with names of proprietors of factories, location, name of factory, capital, staff, raw material (in tons), power used, output, and value. The article also contains shorter sketches of the industry in Ceara and Maranhao.

The same issue contains the message of the President of Colombia; also, special articles on "**South American Boundaries,**" by Augustin de las Manos Albas; "**When the Panama Canal is Opened,**" by Commander E. Hamilton Currey, R. N.; "**From the Sea to Bogota,**" "**The Southernmost Commercial Town in the World**" (Punta Arenas); "**Maurice O'Higgins;**" a comprehensive article on Argentine statistics, accompanied by numerous charts and maps issued by the statistical and rural department of the ministry of agriculture of Argentina; "**Bahia Blanca—A Port with a Future,**" "**The City of the Kings,**" (Lima); "**Chilean Independence Day,**" and other articles, besides two editorials on the Panama Canal.

"**The Prospects of Nitrate Companies,**" in *The South American Journal*, deals at some length with the outlook of the nitrate industry and the prospects of the many companies engaged in its exploitation. The writer evidently anticipates something of a boom in the industry, and elucidates the reasons therefor, and that in a very convincing manner.

"**The Argentine Railway Year,**" in the October 28 issue of *The Economist* (London), gives a most comprehensive report on the prosperity of the five leading railways of Argentina, viz, the Buenos Aires & Pacific, the Buenos Aires Great Southern, Buenos Aires Western, Central Argentine, and the Entre Rios. Tabulated summaries of gross receipts, working expenses, and net revenue are given, as are also tables showing receipts per mile and the percentage of passenger and freight traffic, dividends for past two years, etc.

"**Commerce and the Panama Canal**" is a thoughtful editorial in *The American Banker* of November 4. Since Canada's rejection of reciprocity the United States is, in the opinion of the editor, forced to look southward for countries with which to cultivate commercial relations. Recognizing the fact that the enormous home consumption of our food products will soon place the United States in the ranks of food-importing countries, the writer emphasizes the necessity of reciprocity treaties with the South American countries, also dwelling on the great advantage to be derived from the opening of the Panama Canal, which will give New York 2,500 miles and New Orleans 3,500 miles advantage over Great Britain in the shipping to the great Pacific coast of South America.

"**Inorganic Nitrogenous Plant Foods,**" by Dr. F. J. Machalske, is an informative article in *The American Fertilizer* of October 7, 1911, dealing historically, scientifically, and practically with the fertilization of soils. Much of the article is given to Chilean saltpeter (sodium nitrate) and detailed description of the industry in Chile, mode of excavating the crude nitrate, its chemical constituents, amount exported, etc. The scientific method of obtaining nitrogen from the air is also gone into and thoroughly explained.

"**Panama Quarantine**" is an article in *Modern Sanitation*, written by J. W. Davis, describing the pleasant features of the quarantine station on the little island of Culebra in the bay of Panama, and giving some interesting facts as to the efficiency of this service and statistics furnished by Dr. Fleetwood Gruber, the medical officer in charge.

"**A Peruvian Foundry on Top o' the World,**" by William T. Paul, is a most instructive article, describing the new foundry of the Cerro de Pasco Mining Co., at La Fundacion, near Cerro de Pasco, Peru. The description, while more or less technical in character, is of interest to the general reader, and is well illustrated by two diagrams and no less than 10 views of the plant and its special features. The article appears in the September number of *Castings*.

"**The Lumber Industry in Mexico,**" by S. E. Dean, in *The Mexican Financier* of September 30, contains some not only interesting but astonishing facts relative to this industry in Mexico. For instance:

> Among all the industries of Mexico, great though has been their growth during the past 10 years, none has shown the development and the increase in value of the lumber trade. In the past decade it has outstriped the mining output, beaten the cattle industry, and left agriculture and horticulture far in the rear.
>
> In the State of Chihuahua, which is a fair sample of the lumber-producing States of Mexico, the lumber output has more than increased ten-fold in 10 years. Where the production of dressed lumber was 15,000 feet a day 10 years ago, it is now more than 150,000 feet daily. During the past year the output in Chihuahua, as well as in other portions of Mexico, has maintained this great increase, despite the troublous times through which the Republic has passed."
>
> The supply of standing timber, all good and all untouched by saw as yet, in Mexico, is conservatively estimated at 2,000,000,000 acres, good for 6,000 feet of first-class lumber per acre * * *. Indeed, there is enough standing timber in Mexico to supply both the United States and Mexico for the next 50 years. Compared with the mineral output of the Republic, it may be stated, again conservatively, that the lumber of Mexico is worth more than all her mines combined."

"**Encouraging Outlook at Mexico Mines of El Oro**" sums up the present situation at this plant as seen by the London correspondent of *Mining and Scientific Press* (San Francisco) in the November 11 number.

"**Le Charbon au Mexique,**" by M. Schwarz, in the *Bulletin de la Sociéte des Ingénieurs Coloniaux* (Paris), is a long and detailed account of the Mexican coal deposits, areas where found, exploitation of the industry, the companies engaged therein, with sketches of the properties of each, etc., as well as giving a technical discussion of the geological phases of the kinds of coal found.

"**The New President of Mexico,**" by Fielding Provost, is the leading article in the November *Pan-American Magazine*. It is a biographical sketch of President Madero and deals somewhat with his family history, with the conditions that brought about the revolution in Mexico, with the Madero family's connection therewith, and, finally, with a most hopeful prophecy as to the country's future.

In the Spanish section of the same publication we note "**Progreso del Estado de Durango,**" a condensed history of the State of Durango, Mexico.

BOOK NOTES

A Search for the Apex of America. High Mountain Climbing in Peru and Bolivia, including the Conquest of Huascaran. By Annie S. Peck, A. M., with numerous illustrations. Dodd, Mead & Co., New York, 1911. 8vo. 370 pages, $3.50.

Cold-blooded scientists may differ as to the exact facts and figures, as well as to the estimated values given by Miss Peck in her several mountain-climbing adventures into the snow-clad regions of the Andes. She herself frankly acknowledges that verification by better-equipped expeditions must ultimately be secured. But the book is not put out to claim indisputable data relating to Huascaran or other snow-clad peaks in South America. It is a relation of fact, of accomplishment, a personal narrative, and as such must be read and enjoyed by those who love to follow what a human being—and a woman at that—can do in the face of obstacles. Those who admire pluck will enjoy the experiences of the author, who learned the lesson of Bruce's spider, and ceased to try, try again, only when she succeeded on the sixth attempt, Friday, August 28, 1908, in standing on the top of Huascaran. It is a story of pluck clear through, and a well-told story. There are lots of pleasant paragraphs about her experiences in addition to the mountain climbing; there is also an unfailing sense of humor, with a delightful assertion that she is a woman who in many instances knew better than the men just what she wanted, although they seldom agreed with her until it was too late. All such side issues are interesting, but nothing dulls the ambition she had to climb mountains, and that is the essence of the book, as the reader will find.

MOUNT MISTI, AREQUIPA, PERU.

Ascending this mountain, 19,200 feet high, marked one of the earlier achievements of Miss Peck. Since then the plucky mountain climber has succeeded in reaching the heights of still loftier summits. Her latest conquest was the snow-clad Huascaran, whose summit she attained on her sixth persistent attempt.

The Ten Republics. Crown. 8vo. 292 pages, with 12 maps. London, George Routledge & Sons, 1911. 2s. 6d. net.

This is the first and introductory volume of a series to be called "Porter's Progress of Nations," the others, 15 to 20 volumes in all, to be paper bound and to sell at 1 shilling each. The intention is to give the history and present condition of each country in the grand divisions of the world, each volume serving as a condensed study of economic development in the nations which it covers. Of particular interest to readers of the BULLETIN are the Central American Series, the North American Series, and this first volume, dealing with South America (and a long chapter on Panama). The 10 Republics of the southern continent are well handled. While the series is intended rather for the British than for the American reader, yet the facts as given are serviceable for anyone. The editor is Mr. Robert P. Porter, whose name as a trustworthy traveler, statistician, and writer is well known on both sides of the Atlantic.

Historical Atlas. By William R. Shepherd, professor of history in Columbia University, New York. 216 pages of maps, 94 pages of index, by means of which any place mentioned in the atlas can be located. Henry Holt & Co., New York, 1911. $2.50.

Charles H. Haskins, professor of history in Harvard University, is editing the American Historical Series, and this is one of the first volumes to appear, naturally a volume which should accompany and be supplemental to all the others. Of course with the name of such an editor and such a publisher, this atlas must be thoroughly trustworthy and therefore appropriate for the library of every student desirous of confirming the statements of the written page. Its particular value for students of Latin America, however, lies in the fact that several maps are given exclusively to the areas of Latin occupation in America, and other maps demonstrate better than is generally the case the relation of Latin American development to the history of the world.

La Conferencia Pan-Americana de Buenos Aires. The report made by the delegates of Chile to the Fourth International American Conference at Buenos Aires, July 12 to August 27, 1910.

Issued by the ministry of foreign affairs of Chile, this volume is an official résumé of the official proceedings of that conference, with such data as would necessarily be added by delegates. The letter press work is most excellent and shows the advanced stage which the printing art has reached in Chile.

Colección Ariel. From the press of Avelino Alsina, in San Jose de Costa Rica, come to the Columbus Memorial Library nine small duodecimo volumes, paper covered, of about 50 to 100 pages, and at a price of 15 to 30 cents (gold) each, which have been published at frequent intervals as a library collection of the choicest literature of the world. There are "Fragments of the Diary of Amiel," "Poems of Gamboa," "Man and the Earth," by Reclus, with other translations, or Spanish prose and poems, placed thus easily into the hands of lovers of literature The appearance of this series shows the highly intellectual character of the people of that part of Central America, and while the volumes are of themselves intrinsically worth while for their pure Spanish, and are practically convenient as pocket companions, yet they are of incidental interest as indicative of the tastes in that charming Republic that boasts of having more school-teachers than soldiers. The editor is Sr. Joaquin García Monje, and the BULLETIN wishes him all success in his delightful work.

SUBJECT MATTER OF CONSULAR REPORTS

REPORTS RECEIVED UP TO DECEMBER 1, 1911.

Title.	Date.	Author.
ARGENTINA.		
Bulletin of the "Defensa Agricola"	Sept. 8	R. M. Bartleman, consul general, Buenos Aires.
Argentine crops, 1910-11	Sept. 13	Do.
Bulletin of the Ministry of Public Works	Sept. 21	Do.
Trade notes.—Breweries in Argentina; liquid fuel on the Pacific Ry. Co.; vessels carrying immigrants exempted from payment of port dues; sugar cane crushed by the Tucuman sugar mills; live-stock exportation; cultivation of the grape in Province of Mendoza; latest reports from Ministry of Agriculture on crop of cereals; exportation of cereals.	Sept. 22	Do.
Annual report on commerce and industries, Rosario, year 1910	Sept. 23	Do.
Argentine petroleum	Sept. 30	Do.
Trade notes.—Trade in frozen meats; bill granting Government bounty to the first freezing works in Province of Entre Rios; pneumatic-tube system in Buenos Aires; formation of tobacco trust.	Oct. 7	Do.
Exports declared September quarter, 1911	(1)	Do.
BRAZIL.		
Boots and shoes	Sept. 18	Jay White, consul, Santos.
News and trade papers	...do....	Do.
Notes on the construction of the port of Para	Oct. 9	G. H. Pickerell, consul, Para.
CHILE.		
Trade and industrial notes.—11,000,000 Spanish quintals (quintal=101.4 pounds) of nitrate exported from Chile during August, 1911, against 5,925,940 Spanish quintals for same period in 1910; 316 carriages imported into Chile during 1910 (duty on carriages is 60 per cent); Chilean customs receipts for August, 1911; number of persons employed in nitrate works of the Province of Tarapaca, Chile; $2,555,000 United States gold expended on erection of new steel plant at Corral, Chile.	Sept. 19	A. A. Winslow, consul, Valparaiso.
Extension of credit to Chilean merchants	Oct. 3	Do.
Guanaco wool	Oct. 17	W. W. Winslow, consul, Valparaiso.
Trade and industrial notes.—Chilean customs receipts for September, 1911; tin exported from Bolivia for first three months of 1911; orders placed by Chilean Government with various firms in Chile for 373,000 railway ties; 87,104,138 pounds sugar imported into Chile during first six months of 1911 against 104,763,373 pounds for the same period of 1910 and 88,816,519 pounds for like period of 1909; international parcels post business with Chile increasing rapidly; lumps of gold quartz found at Putu near Talca, Chile.	...do....	Do.
Blast furnace at Corral	Oct. 17	Do.
ECUADOR.		
New contract made by the Government of Ecuador with the Compania Nacional.	Oct. 2	Evan E. Young, American minister, Quito.
GUATEMALA.		
Locks	Oct. 25	Geo. A. Bucklin, jr., consul general, Guatemala City.
Population of Guatemalan cities	Oct. 31	Do.
HONDURAS.		
Funeral cars, hearses, etc	Oct. 13	A. T. Haeberle, consul, Tegucigalpa.
Refrigerators	Oct. 16	Do.
Import trade of Puerto Cortes for six months ended June 30, 1911.	Nov. 7	C. I. Dawson, consul, Puerto Cortes.
MEXICO.		
Mexican towns on northern frontier to ask for the restoration of former free-trade zone.	Oct. 7	A. V. Dye, consul, Nogales, Sonora.
Motor vehicles	Oct. 9	Arnold Shanklin, consul general, Mexico City.

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[1] Undated.

Reports received up to December 1, 1911—Continued.

Title.	Date.	Author.
MEXICO—continued.		
Commercial and industrial notes.—Opening of a branch railroad line to the mining camp Cusihuiriachic; early completion of Northwestern Rwy. to El Paso.	Oct. 10	M. Letcher, consul, Chihuahua.
Report on foreign commerce	Oct. 11	Arnold Shanklin, consul general, Mexico City.
Cotton to be produced	Oct. 16	L. T. Ellsworth, consul, Ciudad Porfirio Diaz.
First exportation of refined sugar from the west coast of Mexico to the United States passes through Nogales.	Oct. 17	A. V. Dye, consul, Nogales.
New American colony	Oct. 18	L. T. Ellsworth, consul, Ciudad Porfirio Diaz.
Dips, disinfectants and stock powders	...do	A. J. Lespinasse, consul, Frontera.
Fly paper	...do	Do.
Rubber industry	...do	Do.
Do	...do	Do.
Market for hearses	...do	Do.
Petroleum product	...do	Do.
Ixtle and the fiber industry in San Luis Potosi	Oct. 20	W. L. Bonney, consul, San Luis Potosi.
Commercial and industrial notes.—Contract for timber road connecting with the Northwestern; concession to build an ice plant in Chihuahua; reopening of smelter of copper company; settlement of strike of laborers on the Conchos Dam near Santa Rosalia; reported reopening of Ramon Corona Mine.	Oct. 21	M. Letcher, consul, Chihuahua.
Agricultural machinery	...do	L. W. Haskell, consul, Salina Cruz.
Shipping and railway notes	...do	Do.
Sale of musical instruments	Oct. 23	Do.
Dips and disinfectants for cattle	Oct. 24	A. V. Dye, consul, Nogales.
Cement and lime	Oct. 27	C. A. Miller, consul, Tampico.
Mexican Gulf Coast Agricultural Association	Oct. 29	Do.
Cotton crop	Oct. 30	Do.
Tampico notes.—Packing and ice plant; machine shop and foundry; new lumber yard; citrous fruit shipments; proposed office building; increased importations of automobiles and bicycles; exports of bananas; shipment of cattle to Italy; imports of safes; exports of crude oil; new pipe line and wharf; new steam plow; pineapples and bananas; oil tanks on fire.	...do	Do.
Roofing	...do	C. E. Edwards, consul, Acapulco.
Car equipment	...do	Do.
Guano deposits and mining	...do	Do.
Steel wool and steel shavings	...do	F. Simpich, consul, Ensenada.
Report on cattle and imports	Oct. 31	J. H. Johnson, consul, Matamoras.
Ornamental iron and wire lawn fences	Nov. 2	F. Simpich, consul, Ensenada.
Pianos and player organs	...do	Do.
Mexican pecan crop	Nov. 3	C. E. Guyant, vice and deputy consul general in charge, Mexico City.
No market for concrete machinery	...do	F. Simpich, consul, Ensenada.
"Carica Papaya" or "Melon Zapote" and juice thereof	...do	Do.
Power project for San Luis Potosi, Mexico	Undated.	W. L. Bonney, consul, San Luis Potosi.
Annual commercial report—Part III—Review of import trade	Nov. 4	C. A. Miller, consul, Tampico.
Free entry of foreign corn, in Yucatan, Campeche, and Tabasco, Mexico.	Nov. 7	C. E. Guyant, vice and deputy consul general in charge, Mexico City.
PARAGUAY.		
Market for American salt	Sept. 23	C. Ferris, consul, Asuncion.
Shoe trade	Sept. 25	Do.
Loan to Paraguayan Government	Sept. 27	Do.
PERU.		
Croatian colonists for Peru from the United States	Sept. 23	W. H. Robertson, consul general, Callao.
Peruvian antiquities	Sept. 26	Do.
Federal decree regarding the sanitary control of plant and seed importations into Peru.	Sept. 29	Do.
VENEZUELA.		
Ice plant established in La Guaira	Oct. 5	I. A. Manning, consul, La Guaira.
Tariff change in Venezuela	Oct. 26	Do.

ARGENTINE REPUBLIC

REGISTRATION OF TRADE-MARKS.

An important decision was recently rendered in the commercial courts in connection with the registration of trade-marks. The facts of the case are as follows: The plaintiff had registered the trademark of a well-known European musical instrument under his own name, without any authority from the foreign owners to do so. He then brought action against the legal representative of the mark and sought to deter him from selling the goods. The court has nonsuited the plaintiff on the ground that he was not the original owner of the mark, nor had he any authority to register same.

EXPORTS FIRST NINE MONTHS 1911.

The exports of the Argentine Republic during[1] the first nine months of 1911 amounted to 260,979,170 gold pesos. The principal items were stock products to the value of 126,575,730 gold pesos, agricultural products valued at 122,680,815 gold pesos, and forestal products to the value of 8,932,698 gold pesos.

WHEAT CROP FOR 1911.

The latest reports from the ministry of agriculture, according to an advice from the United States vice consul general at Buenos Aires, predict that this year's crop of cereals will exceed that of 1907 which was a record year. In 1907 the wheat crop was 5,500,000 tons, of which 3,500,000 tons were exported. It is estimated that the exports of wheat from this year's crop will reach or exceed 4,000,000 tons.

PROPOSED IRRIGATION IN PATAGONIA.

The Argentine Government has appointed a corps of engineers, under the able direction of Sr. Carlos Wanters, to report upon a plan submitted to it for the irrigation of lands tributary or adjacent to the Negro River in Patagonia.

TRANSPORTATION OF CEREALS.

It is estimated that the railways of the Argentine Republic are capable of transporting a crop of cereals amounting to 1,561,525 tons, employing for this purpose 67,704 cars. The area under cereal cultivation in 1911 is calculated at 1,000,000 square meters.

The port of Rosario is equipped for loading into ships from 7,000 to 8,000 tons of cereals daily, and the port of Bahia Blanca can handle about 35,000 tons daily.

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[1] Gold peso=$0.965 U. S. gold.

The imports of sacks into the Argentine Republic in 1910, principally for use in harvesting the crop of cereals, amounted to 35,070,725 kilos, and it is calculated that for 1911 these imports will approximate 40,000,000 kilos.

THEATER AND LIBRARY ATTENDANCE.

Interesting data are at hand showing the attendance at the theaters and the libraries of Buenos Aires for the month of September, 1911. In the 75 playhouses there were given during the month 2,010 performances. At these productions there were present 825,690 persons and entrance fees paid amounting to $486,167. There are four public libraries in the city, and during the month of September 13,783 works were consulted by the 9,674 persons in attendance.

TOBACCO COMBINATION.

The Argentine Tobacco Co., registered in London during October, 1911, has acquired 12 of the leading factories in Argentina. The company will continue to raise tobacco and manufacture the leaf into cigars and cigarettes, enjoying the economies and advantages which accrue to combined industries.

BOUNTY ON STOCK INDUSTRY.

A report from Vice Consul General Ross J. Hazeltine at Buenos Aires advises that the Chamber of Deputies has passed a bill granting a bounty to the first freezing works erected in the Province of Entre Rios. The bounty is to be paid for five years and to consist of $2 per head for cattle, and $0.40 per head for sheep exported.

CONSULAR NOTES.

It is stated that the Argentine Government, through the ministry of agriculture, has exempted from the payment of port dues vessels carrying a minimum of 1,200 immigrants per voyage.

The Province of Tucuman is rapidly becoming the center of the sugar industry of the Republic, its estimated output of sugar for the year 1911 being 160,000 tons.

The live-stock exportation from Argentina for the first seven months of 1911 totaled 14,163 animals.

Of the 111,808 acres devoted to the cultivation of the grape and production of wine in the Province of Mendoza, 18,810 acres are planted with French vines, and 92,998 with native varieties.

A movement is on foot to also utilize the subways of Buenos Aires now under construction for a pneumatic tube service for carrying the mails.

The total declared exports from Rosario for the year ending June 30, 1911, are $5,283,770.

NEW STEAMSHIP SERVICE TO LIVERPOOL.

The Lamport & Holt Line has inaugurated a new steamer service between Buenos Aires and Liverpool in which three vessels of 12,000 tons each are employed. The ports of call between Buenos Aires and Liverpool are to be Rio de Janeiro, Lisbon, Vigo, and Southampton.

BUENOS AIRES TO PACIFIC RAILWAY.

During the last 12 years the Buenos Aires to Pacific Railway has increased its lines from 687 kilometers to 5,127 kilometers, not including sections of railway now under construction but not yet opened to public service.

The capital of this railway, which in 1899 was 25,600,000 pesos Argentine gold, now exceeds 192,500,000 gold pesos. To-day the railway extends not only to Mendoza and the surrounding country tributary thereto, but crosses the great pampa of central Argentina and links the Federal capital with the busy port of Bahia Blanca.

The roadbed and rolling stock of the railway have been greatly improved, and the most modern passenger and freight cars are now employed in handling the immense and ever-growing traffic of this line.

INCREASE OF RAILWAY CAPITAL.

The boards of directors of the Buenos Aires Southern and the Buenos Aires Southwestern railways have increased their capital to the extent of £5,000,000 for the purpose of investing the same in the construction of new branches and other railway improvements in the Argentine Republic.

STATUE TO DEAN FUNES.

On December 8, 1911, there was dedicated at Buenos Aires a monument to Dean Gregorio Funes, an illustrious patriot and historian of Argentina. Appropriate exercises were held and fitting tribute was paid to the noted ecclesiast.

BOLIVIA

BUDGET FOR 1912.

According to the proposed budget for the year 1912 and submitted to the Congress, the revenues are fixed at 18,330,100 bolivianos and the expenditures at 18,725,796.18 bolivianos, representing a deficit of 393,696.18 bolivianos.

The expenditures are distributed as follows among the various departments:

	Bolivianos.[1]
Legislative	315, 382. 00
Foreign relations and worship	1, 037, 133. 23
Treasury	4, 891, 797. 18
Government and fomento	3, 379, 373. 00
Justice and industry	1, 332, 627. 60
Public instruction and agriculture	2, 070, 800. 10
War and colonization	5, 698, 683. 07

EXPORTS FROM NEW YORK TO BOLIVIA, OCTOBER, 1911.

Through the courtesy of Sr. Don Ml. V. Ballivián, jr., secretary of the Legation of Bolivia in Washington, the BULLETIN is enabled to publish the following table showing the exports from New York to Bolivia for the month of October, 1911:

Machinery	$29, 997. 52
Cotton	23, 405. 49
Hardware	19, 470. 95
Foodstuffs and beverages	6, 624. 62
Kerosene	6, 199. 63
Miscellaneous	56, 974. 29
Total	142, 672. 50

CUSTOMS MODIFICATIONS.

The Chamber of Deputies of the Congress of Bolivia has passed a bill increasing the customs duties 15 per cent on the duties now in force, and imposing a duty of 2 per cent on merchandise hitherto included in the free list. Certain articles, such as coal, crude petroleum, benzine, and denatured alcohol, are exempt from duties, as is also merchandise imported by the Federal or municipal Governments for use in public works. Articles specified in railway contracts as free of duty because intended for use in railway construction are also exempt from the payment of import duties.

TARIJA TO QUIACA RAILWAY.

The Chamber of Deputies has authorized the Federal Government to obtain estimates and bids for the construction of a railway 108 miles in length from Quiaca, on the northern boundary of the Argentine Republic, to Tarija, Bolivia. The Government will guarantee interest on the money invested in construction at the rate of 5 per cent per annum.

BOLIVIAN RAILWAY CO.'S CONSTRUCTION.

A recent report of the Bolivian Railway Co., published in "El Ferrocarril," one of the leading newspapers of Cochabamba, shows the following results:

The main line of the railway of this company to Potosi has been completed from Rio Mulatos to kilometer 80, and from Potosi to kilometer 33. There have been finished

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[1] The boliviano has a value of approximately $0.39 United States gold.

197 culverts and 62 bridges, the station at Rio Mulatos has been erected, and the telegraph line extended to kilometer 136. Over 1,500 laborers are engaged in construction work, and 52 kilometers of the railway line still remain unfinished.

The Cochabamba Railway line has been staked off to kilometer 107. Grading has been finished to kilometer 60, and grading work is actively progressing between kilometers 60 and 107. Ballasting has been finished up to kilometer 21, and is being pushed forward between kilometers 21 and 60. Track has been laid to kilometer 54.6, and the telegraph line is in operation to kilometer 93. Over 3,500 workmen are employed in the construction of this line, and preliminary work is being undertaken between kilometers 85 and 107. No active work has been done on the remainder of the road covering a distance of about 115 kilometers.

The line to Tupiza is staked up to kilometer 86, and grading is being done over this part of the right of way. Over 500 workmen are employed in the construction of this line.

The line to Yungas has been definitely surveyed to kilometer 67, and active preparations are being made for pushing construction as fast as possible.

CHIMORE RAILWAY CONCESSION.

The transportation and navigation committee of the Chamber of Deputies of the Federal Congress of Bolivia has recommended that the National Congress grant a concession to Simon I. Patiño for the construction of a railway from Cochabamba to a port on the Chimore River. This railway is to be operated by electric or steam traction, or both, at the option of the concessionnaire. The recommended gauge of the railway is 75 centimeters, but if this gauge should be found unsuitable after the railway route has been surveyed, then a meter gauge line may be constructed.

The survey is to be made within 18 months from the date of the concession, and the work must be commenced within six months after the opening of the Oruro to Cochabamba Railway to public traffic. The main line may be extended, or branch lines constructed, but in such cases the previous consent of the Government must be obtained. Recommendation is made that no parallel railways be allowed to be built within a zone extending 40 kilometers on either side of the right of way of the main line of the road.

The construction material for building the railway is to be imported free of duty. At the end of 99 years the line and all its rolling stock, are to revert to the Government.

The approximate cost of the railroad is £600,000. The concessionnaire has the option on the purchase of land up to 200,000 square leagues on the Chapare, Chimore, Mamore, and Isiboro Rivers and their tributaries, at the rate of 10 centavos per hectare within four years from the date of the granting of the concession. The concessionnaire must establish a port on the Chimore River, and may do so on the other rivers mentioned above.

The concession may be transferred to third parties, the previous consent of the Government having been obtained, but is not transferable to a foreign government.

BRAZIL

A LATIN AMERICAN LIBRARY.

The secretary of foreign affairs of Brazil is being urged to consider the establishment of a Bibliotheca Internacional Latino Americana for the proper development of intellectual progress between the Latin American countries.

HOMES FOR WORKMEN.

The Congress is considering a project for the erection of homes for workmen and Government employees. For this purpose a bond issue of $5,000,000 at 5 per cent is embodied in the plan. The bill provides that a certain percentage of the salaries of workmen and Government officials be deducted monthly for the payment to the contracting companies.

INTERNATIONAL CHAMBER OF COMMERCE.

The inaugural session of the International Chamber of Commerce of Brazil was formally held on November 15 in the presence of the President of the Republic and a large gathering of notables. This institution is the result of the energetic efforts of the minister of agriculture for its establishment, and it has for its object the development of commercial relations with other countries. It will also organize under its auspices information centers in countries which have commercial intercourse with Brazil.

AN AERIAL CLUB.

A movement is on foot to organize an "Aero-club Brazileira" under the leadership of Dr. Alvaro de Teffé, Maj. José F. Leité de Castro, Dr. José Ribas Cadaval, Dr. Raphael Pinheiro, and Lieut. Mario Hermes da Fonseca. The object of this organization will not only be to experiment with aerial craft for amusement, but to establish a large fleet of aerial vessels for military defense and for use in exploring and exploiting the wilderness of Brazil.

IRRIGATION PROJECT.

A bill has been presented to the Congress outlining an extensive irrigation project for the development of agriculture. The bill makes the following provisions for the payment of the heavy expenditures entailed in this scheme. For the construction and service of the irrigation works a special irrigation fund shall be established consisting of 2 per cent of the total receipts of the Republic for a period of 10 years, 5 per cent of the total receipts for 10 years of the preferential States, the proceeds from the sale of the products of the public lands, and the taxes levied for the use of the irrigation works. Priority in the creation of the irrigation works will be granted to those States agreeing to the 5 per cent tax and are hence designated as preferential States.

FISHERIES IN BRAZIL.

A company has been organized in Brussels to develop the fishery industries of Brazil. The company plans to establish model fishery schools and conduct the business along scientific lines. A land concession will be asked for a joint colony of agriculturists and fishermen.

METALLURGY INDUSTRY.

To develop the metallurgy industry in Brazil the President of the Republic has been empowered to guarantee the use of national products in preference to foreign, and to allow the same privileges over the national railways as are granted to the mining industry.

BOUNTY ON YERBA MATÉ.

The State of Para has passed a decree granting a bounty of approximately 3 cents on every kilo of yerba maté exported to countries where this product is as yet little known.

TO CONTROL THE CACAO INDUSTRY.

The Cacao Congress which recently met at Bahia has appointed a permanent committee of five with headquarters in Bahia. This committee is empowered to appoint delegates in the various cacao-producing countries to thus form an international committee. The latter will receive reports from planters, so that they may at all times be informed as to the size and extent of the yield and be in a position to regulate the industry so as to prevent violent fluctuations in prices.

MISCELLANEOUS CONSULAR NOTES.

The value of imports of boots and shoes into Brazil for 1910 is given at $333,495. The shoe factories in the State of Sao Paulo manufacture annually over 3,000,000 pairs of boots and shoes.

Recent reports indicate that the works at the port of Para are now nearly completed. The Federal Government is providing the city with most modern docking facilities, while the State government is endeavoring to still further improve the hygienic and sanitary conditions. The completed works will possess an internal dock, floating docks, generating plant, warehouses, and many other features.

STEAMSHIP SERVICE.

An important waterway service has been organized for the Amazon River and its branches. Twelve vessels of 1,000 tons each, adequately equipped, and 14 smaller vessels for service on the smaller rivers will be commissioned for this line.

NEW BUSINESS ORGANIZATIONS.

Rio de Janeiro Hotel Co. (incorporated Portland, Me.); capital, $3,000,000; to erect first-class hotels in Rio.

Anglo-Brazilian Power & Shipping Co. (London); capital, $1,500,000; general agricultural development and exploitation, particularly in Curityba, Parana.

Société d'Exploitation Agricole de Ville Raffard (Paris); capital, about $125,000; agricultural development in Sao Paulo.

Amazon River Steam Navigation Co. (London); capital, approximately $1,500,000; development of navigation and agricultural possibilities.

Jequié Rubber Syndicate (London); capital, $200,000; rubber cultivation in the State of Bahia.

Société Franco Sud-Américaine de Travaux Publics (Paris); capital, about $750,000; for construction of railways, ports, and other public improvements.

Companhia Brazileira de Pescaria (Rio de Janeiro); capital, approximately $165,000; to develop the fishing industry and establish canning factories.

RAILROAD CONCESSIONS.

The following concessions are reported as granted:

To the Dourado Railroad to build a line from Sao Joao das Tres Barras to San Jose do Novo Horizonte.

To the Bahia Minas Railroad to construct a branch from any convenient point of the line to Conquista City.

To the Brazilian Railroad Construction Co. for the building, use, and enjoyment of a line from Antonio do Juquia to a point on the left bank of the Rio Ribeira de Iguape, about 400 kilometers below the mouth of the River Juquia. This concession to extend for 25 years.

To the Rede Sul Mineira to build a line from Santa Rita da Extrema to San Jose do Paraiso and to Arcos, about 500 kilometers long.

RAILROAD NOTES.

The section of the Goyaz Railroad from Araguary to Catalao has been inaugurated.

The governor of Para has signed a bill passed by Congress for the construction of railroad lines in the valleys of the Gurupy, Tocantins, Araguya, Xingu, and Tapajos Rivers, in the Brazilian Guiana.

The plans and specifications for the line from Igarapava to Uberaba have been approved.

CHILE

NEW LOAN.

A law of October 18, 1911, authorizes the President to contract for a loan of £3,500,000 at 4½ per cent and 1 per cent amortization, the proceeds to be applied to the national defense.

PUBLIC DEBT.

According to a statement submitted by the minister of finances to the National Congress, the public debt of Chile on October 14, 1911, amounted to £43,166,270.

INCREASED CUSTOMHOUSE RECEIPTS.

The customhouse receipts of the Republic for the first nine months of the year amounted to $93,872,898 gold and $1,388,433 paper, revealing an increase over the corresponding period of the previous year of $9,987,402 gold and $251,157 paper.

NITRATE PRODUCTION.

According to latest statistics, the nitrate production for the first nine months of 1911 amounted to 40,468,158 quintals (101.6 pounds), of which 34,620,088 quintals were exported.

MUNICIPAL SLAUGHTERHOUSE.

The municipality of Valparaiso has approved the project to erect a new slaughterhouse. The plans designate the village of Portales for the site of this building, which is to be equipped with the most modern sanitary apparatuses. The contracting parties will pay an annual rental of $50,000.

MISCELLANEOUS CONSULAR NOTES.

In the Province of Tarapaca, 21,402 persons are employed in the nitrate works.

The international parcels-post business with Chile is increasing very rapidly.

The importations of sugar into this country for the first six months of 1911 amounted to 87,104,138 pounds.

During 1910 there were 316 carriages imported into Chile, of which 274 were furnished by United States firms.

About $2,555,000 United States gold has already been expended on the steel plant at Corral. It is estimated that over $1,500,000 more will be required to complete the works.

TO STUDY ABROAD.

Sr. Pedro Aguirre Cerda has been named official delegate from Chile to the Congress of Social Hygiene, at Rome.

Dr. Alejandro Mujica, of the medical school, has been commissioned to travel through Europe to study the latest methods and theories on the treatment of eyes.

ANNUAL CATTLE SHOW.

The annual exposition of cattle held under the direction of the National Agricultural Society at Santiago, Chile, was recently opened. The President of the Republic and a large distinguished gathering attended the opening of this interesting display of the pastural industry of the country.

INVENTION FOR LIQUID FUEL.

Interesting trials have been conducted at Valparaiso with an invention by a native which, if proved satisfactory, will effect decided economies where fuel is used in large quantities. The apparatus is one for burning liquid fuel instead of coal in locomotives and other kinds of machinery. The instrument is simple and can be readily adjusted to any boiler. Smoke is absolutely suppressed by the use of this device, and the liquid fuel shows an economy of 75 per cent against the use of coal.

ELECTRIFICATION OF RAILROAD.

The minister of industry and public works has received a proposal from a United States electrical concern to electrify the first section of the railroad from Los Andes to Las Vegas, at a cost of approximately four and a half to five and a half million dollars, according to the type of locomotive chosen.

ELECTRIC-LIGHTING PLANTS.

The Diario Oficial of October 25, 1911, contains the text of two decrees granting concessions to supply electric-lighting facilities to the cities of Coquimbo and Calama. Work must be commenced within six months and completed within one year of date of concession.

PLANS FOR NEW LINE COMPLETED.

The plans for the projected railroad from Valparaiso to Casablanca have been completed. The line will have an extension of 57.799 kilometers, and consist of branches from Casablanca to Ceniza, thence to Valparaiso.

COLOMBIA

NEW CABINET.

The new cabinet as reorganized by President Restrepo is reported as follows:

Minister of the interior, Sr. Pedro M. Carreño.
Minister of foreign affairs, Sr. José María González Valencia.
Minister of finance, Sr. Francisco Restrepo Plata.
Minister of war, Sr. José Manuel Arango.
Minister of public instruction, Sr. Marco Fidel Suarez.
Minister of public works, Sr. Simón Araujo.
Minister of the treasury, Dr. Tomás Eastman.

MESSAGE OF PRESIDENT RESTREPO.

The message of President Restrepo, sent to Congress October 26, 1911, calls particular attention to the need of passing certain very urgent laws. Chief among them are those relating to extraordinary and supplementary credits, and to the budget for 1912. Then the following proposals are made for new laws: To establish a national administration district in the Archipelago of Providencia; for a parcels post; for boats in the revenue service and the transshipment of merchandise; for the collection of the national stamp tax; for reform in the customs tariff; for the annullment of article 1, in law 59 of 1909; for authorization to arrange the external debt and to carry out a loan for the conversion of paper money; for pensions and awards; for settlement of the debt of the Girardot Railway; for a military law of the country; and for obligatory military service.

In regard to public instruction, the President commends the idea of introducing teachers from abroad with new methods of teaching. He recommends the projected railways from Puerto Wilches, Girardot, and Santa Marta, and he approves the efforts of the Government to compromise the differences existing between Colombia and other nations. He calls attention to the contracts arranged by the Government with the Magdalena River Steamboat Co. and the Compañia Colombiana de Navigación Fluvial for the navigation of the Magdalena River, as they touch a subject of great importance to the welfare of the country.

Among other projects of the Government, he emphasizes two as being very important: First, that of colonizing unoccupied lands; and second, that of reform in the banking laws of the nation.

CITY IMPROVEMENT IN CARTAGENA.

A fine monument to the Republic has recently been erected in Cartagena by the organization of national employees, who presented it to the municipality. The statue was placed in the centennial park and was dedicated during the centenary festivities. It shows the Republic—in symbol—standing on the earth, which is supported by two lions.

ANOTHER INTENDANCY ESTABLISHED.

By a decree of September 13, 1911, the National Congress has created a new *intendancy,* to be known as San Andrés de Providencia. For the maintenance of this new territorial division, a tax of 15 per cent on all merchandise imported from foreign countries and a tax of $1 per 1,000 coconuts exported from Colombia have been established.

DENTAL SCHOOL IN BOGOTA.

Beginning early in the year 1912, there is to be established in Bogota a dental institute that will teach the science of dentistry in accordance with the latest improved methods employed in the dental colleges of the United States.

TELEGRAPH EXTENSION.

The telegraph extension from Caceres to Ayabel has been completed and opened to the public service.

TO CONTROL PLATINUM DEPOSITS.

A report from London indicates that an English company has purchased the lands belonging to the Valle del Condoto, and will exploit the immense platinum and gold deposits.

COSTA RICA

BUDGET FOR 1912.

The budget for the fiscal year 1912 is given at the total sum of 8,610,359.90 colones (colon = $0.465 gold) for Government expenses. Of this sum the allowance for the various departments is as follows:

	Colones.
Legislative department	150, 000. 00
Interior department	1, 086, 279. 46
Foreign affairs department	207, 999. 75
Department of justice	329, 744. 00
Department of religion	24, 000. 00
Department of public charity	117, 780. 00
Department of public instruction	1, 201, 059. 04
Department of war and police	1, 255, 097. 35
Department of marine	42, 960. 00
Department of commerce and industry	2, 985, 531. 60

To meet these expenses the income is estimated at 8,660,000 colones.

TARIFF CHANGES.

By presidential decree of October 21, 1911, confetti is appraised in the national customshouse at the rate of 50 centavos per kilogram (1 colon = \$0.465 gold, and 50 centavos is ½ a colon; 1 kilogram = 2.20 pounds). By legislative decree sole leather is appraised at the rate of 5 centavos per kilogram. The change is to go into effect September 20, 1911, and to continue two years.

NEW CANTONS.

By congressional decree the new Canton of San Carlos has just been made in the Province of Alajuela. There are now 10 cantons in that Province.

COFFEE CROP.

According to recent statistics the coffee crop of the Republic for the year just ending was estimated at 206,609 sacks, weighing 12,641,156 kilos (kilo = 2.20 pounds), this crop being 1,775,770 kilos less than that of the year before. The amounts exported were as follows:

	Sacks.
England	169, 382
United States	16, 652
Germany	13, 843
Other countries	6, 722

The mean price obtained in 1910–11 was 25.84 colones (colon = \$0.465).

PROPOSED ELECTRIC TRAMWAY.

The Constitutional Congress of the Republic of Costa Rica has issued a decree, dated October 6, 1911, authorizing the construction of an electric tramway from the city of Alajuela to that of Grecia. Motive power may be taken from any of the neighboring streams as deemed best. The roads may be occupied without charge when necessary, and the right of eminent domain may be exercised. All material for construction may be introduced free of duty. For 25 years a guaranty of 6 per cent will be extended by the Government, the cost not to be above 1,000,000 colones (colon = \$0.465 gold). At the lapse of the concession the property reverts to the Government. Further details can be obtained by concessionaires on application.

CUBA

MESSAGE OF PRESIDENT GÓMEZ.

At the opening of the Cuban Congress, on November 6, 1911, President José Miguel Gómez sent a message dealing with the affairs of the Government since April 3, 1911.

President Gómez stated that the productive forces of the country were going forward under a peaceful and orderly régime. Foreign relations were cordial in every direction, and the diplomatic and consular service was on a sound footing. This was composed of 16 ministers extraordinary and plenipotentiary, 8 secretaries of legation of the first class, 8 secretaries of the second class, 60 attachés, 9 consuls general, 9 consuls of the first class, 32 of the second class, 4 vice consuls, 15 consular agents. and 90 honorary consuls. Ratifications of the arbitration agreement between Cuba and Brazil have been concluded, and the treaty of extradition between Cuba and Venezuela is pending, while the approval of the conventions of the Second Hague Conference is waiting for the action of the Senate. The Government has accepted the protocol of the Universal Postal Union for the exchange of a parcels post, a money-order convention with Mexico has been celebrated, and negotiations to the same end are underway with France, Chile, and Great Britain. A treaty of friendship with China is projected. Invitations from various foreign governments to take part in international congresses and exhibitions dealing with economic, scientific, literary, commercial, and political matters have been accepted.

In reference to the department of justice, the President advises that the still effective law of 1870, in regard to pardons, be modified to conform to a republican form of government, as Cuba has to-day. He adds that a palace of justice ought to be built in Havana, since the subdivisions connected with the department are not properly housed.

It is proposed to reform the election laws, and a law to regulate the procedure for the expulsion of pernicious foreigners is requested. The telegraph lines of the country have increased remarkably. Since the last message 15 new post offices have been opened, 27 money-order stations, and 9 telegraph stations. The military establishments have been quite efficient during the year, and in order to increase their activity and also to provide the nation with a corps of officials possessing the best technical knowledge on such matters, arrangements have been made whereby officers from France and the United States are to be attached to these Cuban military schools, and these are to be equipped with the best appliances obtainable.

In regard to the department of the treasury, it is stated that during the period between March 1 and September 30, 1911, orders against the treasury had been issued to the value of $21,710.27 of the budget of 1909–10; $11,668,918.02 of that of 1910–11; and $7,747,893.62 of that of 1911–12; a total of $19,438,521.91, leaving on deposit September 30, $1,673,965.85, as compared with the $1,566,374.59 of the previous February 28. During these seven months $17,087,531.17 were collected from various sources, and adding this sum to the

$2,146,686.64 and the $2,154,408 obtained from the national loan and the national lottery, there results $21,388,625.81, this equaling a monthly average of $3,055,517.97, which would give a yearly sum of $36,666,215.64, showing a difference in favor of the actual situation of $1,886,535.64, although the income calculated in the budget reached only $34,779,680.

The commercial movement has been encouraging. During the fiscal year 1910–11 the importation amounted to $108,006,256 and exportation to $128,542,038.

In regard to public works, Congress was asked to recognize the advantage of voting credits for continuous work on stretches already included in the general plan of improving the roads of the country. There are now 1,663 kilometers (1,033 miles) of good cart roads open to public traffic, which have just cost $610,000, while other roads and bridges have cost $135,000 and river improvements $221,000. Besides these, during the months from April to November, 1911, over $1,000,000 have been expended in the regular national and municipal improvements already ordered.

In regard to agriculture, the President reports that he has, in so far as was possible, applied the sums available to extend the natural resources of the country. He has brought to a successful conclusion the building of the agricultural school in Pinar del Rio, and is pushing those in Matanzas, Santa Clara, and Oriente; the land for that in Camaguey has been purchased, and the council has decided to present the land for a school in Habana. The division of pisciculture has been active, and, besides its work directed to fishes themselves, it has aided the sanitary officers by seeing that unclean fish were no longer sold in the markets. Plans have been laid to invite 100 families to come to Cuba to form colonies, for which the sum of 100,000 pesos annually has been voted in the allowance under the division of immigration and colonization. A statistical division has been established to give particular attention to collecting data on all matters relating to the department. The development of the mineral industry continues favorably, but the problem of reforestation of public lands needs consideration.

Attention is called to the need of modernizing the system of weights and measures, so as to bring it into accord with usage in other countries.

The commerce of Cuba receives considerable space. The President pleads for the reorganization of the school of commerce, which should have a national character, and should be able to fit consular officers for their duties; night classes might with advantage be added.

In speaking of public instruction, it is noted that 221,641 pupils were matriculated, of these 116,560 being males. There were 3,774 national schools, 38 being night schools for adults. The superintendent of education wishes to increase this number by 150 additional courses, for which he asks an appropriation of $25,000. A normal school is advocated, and a museum for the exhibition of reproductions of artistic originals. Great praise is given to the vacation schools operated recently, and the President hopes that they will be continued and that plans may be devised to give city children a holiday in the country. The Republic has been free from epidemics, and the mortality ratio has lessened. The President recommends the nationalization of the sanitary service against tuberculosis. He reports that the Government was represented at sanitary conferences in Paris and Santiago (Chile), and has established sanitary inspection of immigrants in Santiago de Cuba, Cienfuegos, and Nipe.

TO MODIFY NOTARY FEES.

The President of the Republic, in accordance with a decree passed on the 23d of November, has named a commission to study the present law on notary fees with a view to submitting recommendations to the ministry of justice for its change. The law now in force is the old Spanish enactment of May 16, 1874.

TO EXHIBIT NATURAL RESOURCES.

The ministry of agriculture has invited the proprietors of mines and forests to forward to the department samples of the minerals, woods, and other natural products that they may be properly exhibited at the national exposition of agriculture to be held at Habana early in 1912.

ARMORED CRUISER FOR CUBA.

One of the several small armored cruisers which are being built in England for the Cuban Government has been completed and started for the island on December 1, 1911.

SITE FOR STATUE CHOSEN.

The commission to whom had been intrusted the task of selecting a suitable site for the monument to Luz Caballero, now being made in Paris, have decided upon Punta Park, opposite the entrance to the harbor of Habana.

STATUE TO AGUILERO.

Bids have been asked for the erection of a monument to Francisco V. Aguilero, to be done in bronze with a marble or granite base. Six thousand dollars have been appropriated for this work.

MISCELLANEOUS NOTES.

Estimates of the sugar crop place the yield at from 1,600,000 to 1,700,000 tons.

Jury trials in criminal cases are being agitated by the President.

Workingmen's houses are to be constructed near Habana and sold on small annual payments.

A new provision market is to be erected in Habana at a cost of $180,000.

TOBACCO GROWERS TO ORGANIZE.

The tobacco-leaf merchants throughout the entire island of Cuba are planning to form a solid organization for the purpose of mutual protection and of putting in practical execution various cooperative policies which will tend to improve conditions in the tobacco industry.

PRIZE TO CUBAN FACTORY.

The straw-hat factory "La India," of Habana, was awarded the grand prize at the International Exposition held at Amberes, Belgium. This exhibit represents the first hat factory in Cuba operating with machinery, and displays an annual output of 300,000 hats. It has also won prizes at various other exhibitions.

BRANCH BANK AT SANTA CLARA.

The Banco Nacional de Cuba has opened a branch at Santa Clara. The offices are housed in a special building similar in design to the bank buildings of this company at Matanzas, Cuba, Pinar del Rio, etc.

NEGOTIATIONS FOR RAILROAD.

Agents of the United States concern that proposes to build the electric railroad from Habana to Matanzas and thence to Cardenas have arrived at Matanzas, and are now in conference with the governor of the Province and other officials to obtain the necessary data to enable them to proceed with the actual work.

TO ACQUIRE RAILROAD LINE.

According to a circular letter sent to shareholders, the board of directors of the Ferrocarriles Unidos de la Habana have decided to acquire the ownership of the Ferrocarril de Oeste. The transaction will be effected through an exchange of the shares of the one company for those of the other.

DOMINICAN REPUBLIC

PRESIDENT AD INTERIM ELECTED.

The Dominican Congress has elected Senator Eladio Victoria president ad interim to fill the office left vacant through the sudden tragic death of the late President Caceres.

NEW CABINET.

A dispatch from Santo Domingo announces the following cabinet designated by President ad interim Victoria:

Secretary of interior and police, Sr. Miguel A. Román, jr.
Secretary of foreign affairs, Sr. José Maria Cabral y Báez.
Secretary of treasury and commerce, Sr. F. Cordoba.
Secretary of war and marine, Sr. Manuel García.

Secretary of justice and public instruction, Sr. A. M. Soler.

Secretary of agriculture and immigration, Sr. Rafael Díaz.

Secretary of (fomento) promotion and communications, Sr. Manuel de Jesús Troncoso de la Concha.

BUDGET FOR 1911-12.

The National Congress has approved the budget for the fiscal year 1911–12, apportioned as follows among the various departments:

Legislative	$118,300
Executive	27,020
Judiciary	199,054
Interior and police	647,339
Foreign affairs	93,384
Treasury and commerce	1,960,660
War and marine	543,063
Justice and public instruction	257,317
Agriculture and immigration	109,920
Promotion and communication	295,458
Miscellaneous	5,485
Total	4,257,000

MONUMENT TO HOSTOS.

A monument is to be erected in Santo Domingo in honor of the celebrated teacher and moralist, Eugenio Maria Hostos. Nearly all of the city governments of the Republic and a large number of private individuals have contributed funds for this purpose.

TO PROMOTE AGRICULTURE.

A comprehensive law for the encouragement of agriculture within the country has been passed by the National Congress. Under the provisions of the bill, exemption from export duties are granted to various products of the soil, as cotton, fibers, tobacco, rosin, sugar cane, etc. It also guarantees that export duties will not be increased for a period of 25 years on exports of coffee, nuts, cabinet woods, cacao, and lumber. Ships engaged in transporting agricultural products are granted a reduction of 50 per cent on port charges.

MISCELLANEOUS NOTES.

A large sugar plantation and mill are planned on the east side of the Romana River by a native sugar grower.

The Royal Bank of Canada has arranged to establish a branch office in Santo Domingo. Another branch will later be established at Macoris.

The customhouse receipts at Santo Domingo for the month of September amounted to $106,673.99.

PUBLIC IMPROVEMENTS.

The Government has approved the plans presented for the construction of hydraulic and electric plants in the cities of Puerto

Plata, Santiago, La Vega, and Moca, and also of the contracts which had been closed with these municipalities. The concessionnaire has been authorized to build a dam at Yaque River for utilizing the water power in the electric plants contemplated.

VAST TIMBER LAND DEAL.

A concession has been granted to a United States corporation to develop the mahogany and yellow-pine trees in an extensive area of land in the Dominican Republic. It is estimated that the total holdings together with options which the concessionnaires possess will amount to more than 15,000,000,000 feet of timber. Arrangements are being made for the building of railroads from the coast to the timberlands. Two of the operations will have their port at Monte Cristi, and the third will use as its base Puerto Juaniato. Already the company has closed deals for the sale of more than a billion and a half feet of mahogany and yellow pine.

ECUADOR

LOAN FOR ECUADOR.

A special advice from the United States minister at Quito indicates that the Government of Ecuador has made a new contract with the Compañía Nacional Comercial whereby that company will receive a commission of 2 per cent for the collection of customs at the port of Guayaquil, and also is given an absolute monopoly on all loading, unloading, and lighterage at that port. This contract was entered into by the Government in consideration of a loan of 600,000 sucres ($292,200). The company will also operate the fiscal wharf at Guayaquil.

SPECIAL FINANCIAL COMMISSION.

To negotiate a loan that will place the finances of the Republic of Ecuador on a firm basis, a special commission has been appointed, and the delegation are now in New York City conferring with various bankers. Capt. Victor E. Estrada, son of President Estrada, is one of the commissioners.

NEW TAX COLLECTING OFFICE.

In order to facilitate the collection of taxes throughout the Republic, there has been established in the Treasury department a "special section intended to control the collection of taxes." This section will also compile and publish a fiscal and commercial bulletin relating to assessments, taxes, etc.

IMPROVEMENT OF PARCELS-POST SERVICE.

An executive decree of October 17, 1911, establishes a foreign section in the Guayaquil post office for the purpose of appraising merchandise shipped by parcels post and collecting duties thereon, the dispatch and delivery of said merchandise, and the transaction of all business relating to this branch of the public service.

PROTECTION OF VEGETABLE-IVORY INDUSTRY.

The Congress of Ecuador has passed a law prohibiting the harvesting of unripe "tagua" or vegetable ivory nuts. The gathering of green "tagua" is injurious to the plant which produces vegetable ivory. A heavy penalty is imposed upon violators of the law.

NEW BUILDING FOR QUITO HOSPITAL.

The Congress of Ecuador has authorized the sale, in January, 1912, of the building in the city of Quito now occupied as a maternity hospital. The proceeds of the sale, together with such other funds as may be necessary, are to be used in the construction of a similar but more commodious maternity hospital.

SANITATION IN GUAYAQUIL.

As a result of the special message which President Estrada submitted to the Federal Congress requesting immediate action on this question, as published in the BULLETIN of last month, the Congress of Ecuador, on October 5, 1911, decreed that the President in the name of the State, should contract with Edmundo Coignet for a loan of 50,000,000 francs to carry out the work for which the latter had contracted with the municipality of Guayaquil for the sanitation, water supply, and improvement of that port. Under this decreee the Government of Ecuador becomes responsible for the issuance and payment of 100,000 bonds of the value of 500 francs each. From the net proceeds of the sale of these bonds 20,000,000 francs are to be placed at the disposal of the "junta de canalización" or board for the sanitation and sewering of Guayaquil to be used in sewering and paving the streets of that city. The remainder of the net proceeds is to be at the disposal of the municipality of Guayaquil for the erection of water works, the building of new docks, and the payment of the mortgage loan of the Territorial Bank.

The bonds shall draw 6 per cent interest on their face value, and the interest is payable to bearer on the 1st of January and July of each year at the domicile of the financial institution or bank of issue. The amortization of a part of this issue shall be annual, by lot, commencing with 1916, and payment shall be made in gold at par. The amount of each annual amortization shall be equal to 1 per cent of the nominal value of the total loan plus the accrued interest. The following taxes, assignments, and guaranties are pledged to the payment of the loan:

(*a*) Two and one-half per cent additional duties on imports collected through the port of Guayaquil.

(*b*) Eighty centavos de sucre on each 46 kilograms of cacao exported through the customhouse at Guayaquil, that from the Province of El Oro excepted.

(*c*) One-half per cent of the taxes of the urban property of Guayaquil.

(*d*) Three sucres on each head of cattle imported into the Republic for consumption, excepting those imported through the Province of Carchi.

(*e*) Ten thousand sucres monthly, which the municipality will deliver to the "junta de canalizacion," through the Bank of Ecuador for account of the municipality. This sum shall be taken from the surplus of the municipal tax on cacao, after paying from one-half of this tax the 60,000 sucres interest due to the bank, and 96,000 sucres interest to the municipal charity board, and from the other half of the tax there shall be paid 75,000 sucres obtained from the municipality in accordance with the order of February 4, 1911.

(*f*) Two per cent per thousand on the value of rural and urban property situated in the cantons of Guayaquil and Yaguachi.

(*g*) The gross receipts from the sale of potable water in Guayaquil.

(*h*) One hundred and seventy-five thousand sucres to be taken from half of the municipal tax on cacao.

(*i*) Eight per cent additional on the import duties collected at the Guayaquil customhouse.

(*j*) Twelve thousand sucres, which the Government of Ecuador shall deliver monthly to the Commercial and Agricultural Bank of Guayaquil, from the proceeds of the wharfage tax in the city of Guayaquil.

The city of Guayaquil guarantees the payment of the bonds by a first mortgage on all the real property it possesses at the present time and which it may in future acquire for the new waterworks, and the construction of the wharf. Covering this transaction, a special contract has been made and the liquidation is fixed for a term equal to that specified for the amortization of the present loan.

After July 1, 1925, the Government shall have the right to redeem at par such bonds as may still be outstanding.

The loan shall be made at 85 per cent of its face value, thereby producing 42,500,000 francs gold.

YAGUACHI RIVER BRIDGE.

The Guayaquil & Quito Railway Co. has constructed a new iron bridge over the Yaguachi River. This bridge was built at the special request of the municipality of Yaguachi, which request was made with the knowledge and consent of the Federal Government. The completion of the bridge is of great advantage to the municipality.

REPAIR OF THE SANTA ROSA HIGHWAY.

The sum of 10,000 sucres ($5,000) has been appropriated by the Federal Congress for the repair of the Santa Rosa highway, in the Celica Canton, and for the construction of a bridge over the Puyango River.

NEW CANTONS.

The Congress of the Republic of Ecuador has established two new Cantons or Districts—the Canton of Pedro Moncayo and that of Cayambe. The first of these Cantons is made up of the parishes of Tabacundo, La Esperanza, Tocachi, Malchinguí, Atahualpa, and San Jose de Minas, and its capital is located in Tabacundo. The second is composed of the parishes of Cayambe, where its capital is located, and Cangahua, Olmedo, Guaillabamba, Quinche, and Oton.

MONUMENT TO VICENTE LEON.

At Latacunga, capital of the Province of Leon, a monument is to be erected to the memory of Vicente Leon, one of the most distinguished heroes of the Republic. It will be of bronze and will represent the patriot on foot. A park, as a suitable home for the statue, is to be developed around it.

A TRANS-AMAZONIAN RAILWAY.

On November 9, 1911, the minister of public works and M. Julian Fabre, manager of the Franco-Dutch Co., signed a contract in virtue of which the Government of Ecuador grants to M. Fabre a concession to build and operate a railway, which leaving the port of Bolivar on the Gulf of Guayaquil is to pass through Cuenca and terminate at some navigable point on the upper Amazon. This line will undoubtedly be very important when once it is built, because in addition to its international significance it will cross four of the richest Provinces of Ecuador and thus stimulate production and traffic, and assuring to them an outlet to the Atlantic Ocean. The Franco-Dutch Co. estimates the cost at about 80,000,000 sucres (sucre=$0.487 gold).

GUATEMALA

MEDAL AWARDED TO PRESIDENT ESTRADA CABRERA.

The King of Spain has bestowed upon the President of the Republic, as recognition of his efforts for public culture, the Grand Cross of the Civil Order of Don Alfonso XII.

THE FESTIVAL OF MINERVA.

This year's celebration of the Festival of Minerva, which has for several years now been one of the national holidays of the Republic, was carried out with great spirit and enthusiasm. The days appointed for the festival were the 28th, 29th, 30th, and 31st of October. Every city in the nation had its own local festivities, but in the capital, Guatemala City, the most elaborate programs were prepared. While the days of the Festival of Minerva are thoroughly days of rest and pleasure for the people, yet the central purpose is to honor education, to instill in the minds of the youth and children of the land a respect for and a desire to partake of a higher education, and especially a determination to make of the school, the great motive force of nationality and industry. In each town a pavilion is dedicated to Minerva, and around this the ceremonies of one kind and another take place.

A SCHOOL FOR APICULTURE.

On November 1, 1911, there was inaugurated in Guatemala City the Practical School for Apiculture, under the direction and largely through the generous care of Sr. Don Vásquez J. There is every promise that the results, both scientifically and commercially, will be favorable.

PECAN CULTURE.

A company has been formed under the laws of the State of Massachusetts, with a capital of $1,000,000, to grow pecan trees in Guatemala. It is asserted that the Republic has abundant land remarkably well suited to this tree, and as the young shoots can be brought from a nursery in the United States, it is hoped to get the first crop of nuts within three years of transplantation.

CENTRAL AMERICAN PRESS ASSOCIATION.

The Central American Press Association, which held its sessions in the city of Guatemala from the 22d of October through the 31st of that month, resulted in much practical good for the newspaper organization of the five Central American Republics. There were about 100 members in attendance, and already the effects are noticeable, for telegraphic dispatches are appearing in various papers, signed and edited by this associated press. The resolutions adopted during the meetings can be summed up as follows:

(1) Members of the Central American Press Association are writers on the press and others who conform to the constitution of the organization.

(2) The object of the association is to work for the principles of journalism, and to advocate pacifically a Central American Union.

(3) Encouragement is to be given to the idea that a Central American nationalism is practicable.

(4) A campaign of publicity is to be opened to find out the opinion of the peoples of the Republics concerning the best form of government which can be secured for a Central American Federation.

(5) For objective point of the propaganda the date 10 years from now is to be taken—that is, the 15th of September, 1921, the date of the one hundredth anniversary of the independence of Central America—so that efforts can be made to bring about on that date a real Central American union as the most worthy celebration of the centenary.

(6) To adopt a scheme of education which will aid to the understanding of such a republican idea.

Details of newspaper organization were of course freely discussed, but the broad principles of intellectual conduct were embodied in the above. A meeting is to be held every year in a place regularly agreed upon.

HAITI

FINANCES OF HAITI.

Under date of October 21 the secretary of finance submitted to the President of the Republic an exhaustive report on the financial situation of the country. It states that on August 16, 1911, there was due to the National Bank, besides the current expenses as provided for in the budget, the sum of $10,407 gold and 206,267 gourdes (gourde = 23 cents approximately); also 1,000,000 gourdes as a result of the recent internal disturbances, the payment of which was granted by a decree of August 22, 1911. To meet these sums a loan of 2,500,000 gourdes was made from the National Bank.

The estimated receipts of the Government to meet the current expenditures are given as follows:

Export duties from coffee	gold	$138,000
Export duties from other products	do	46,800
Port au Prince tonnage	do	73,236
Import duties	gourdes	3,000,000

The report further states that these receipts will not be sufficient to meet these expenses and recommends a radical change in the financial administration of the country, particularly in the customhouse service. To meet the current expenses, the secretary continues, he entered into a contract with the National Bank by which the latter is to furnish, at the beginning of each month, the funds called for by the budget.

COMMERCE OF HAITI FOR 1910.

A report recently submitted by United States Consul John B. Terres, at Port-au-Prince, gives the total imports into Haiti during 1910 at $7,681,746 and the exports at $15,475,331, making a total foreign trade during that year of $23,157,077. These figures do not include the imports entered free of duty which are not accounted for in the customs statistics.

HEADQUARTERS FOR THE ARMY.

Le Moniteur of November 22 publishes a decree of the President setting aside approximately $85,000 for the construction of commodious barracks for the soldiers. Simultaneous with this order, President Leconte addressed a general circular to all the officers urging their heartiest cooperation to improve the standard of the Haitian Army and to promote the personal welfare of the soldiers. It is intended to make these new barracks comfortable in every respect and to establish training headquarters therein.

DOCKING OF FOREIGN VESSELS.

Le Moniteur for November 22, contains the text of a decree issued by the secretary of the interior prohibiting foreign vessels from entering the ports of Haiti at night.

THEATER FOR PORT AU PRINCE.

The concession for the building of a theater in Port au Prince has been transferred to another concessionaire who states that a site for this edifice has already been purchased. Actual construction will be commenced shortly and the building will be erected in accordance with the designs and plans which have been approved by the department of public works.

HONDURAS

NEW PRESIDENT.

In the elections held on November 3, 1911, Gen. Manuel Bonilla was chosen President of the Republic of Honduras and Dr. Francisco Bograu, Vice-President.

THE NATIONAL TOBACCO INDUSTRY.

The Government has recently given added attention to the activities in the national school in Danli, around which tobacco is cultivated in the best of modern conditions and with all agricultural care to developing the plant and obtaining from it a good quality of cigars. The minister of agriculture appointed Señor Don Antonio Bernal Brito to be director of that school, and scientific as well as practical progress is assured under his management. The region of the national agricultural school at Danli, in the southern part of the Republic, is well suited for tobacco culture, and study has lately been devoted to the Cuban method of tobacco growing, with very satisfactory success. Besides the agricultural school the Government maintains a national tobacco factory which is now under the management of two young women who have proved themselves experts in all branches of the tobacco trade.

CONCESSION FOR AN ICE FACTORY IN AMAPALA.

The Government has granted permission to establish a complete ice factory in Amapala, and therefore permits the introduction free of duty of all machinery and accessories related to the plant for the period of five years.

SOAP AND CANDLE FACTORY IN CEIBA.

A concession was recently granted by the Government for the establishment in Ceiba of a modern factory for the preparation of soap and all kinds of candles. The importation of machinery and accessories is permitted free of duty, and protection in this regard is given the concessionaire for a period of 10 years. In consequence he obligates himself to teach the business to five natives of Honduras, and the factory must keep the hospital of the port of Ceiba supplied with soap and candles during the life of the concession.

CONCESSION FOR CUTTING TIMBER.

The Government has granted a concession for gathering timber, chiefly by sawmills, on the north coast. A detail of the contract imposes on the cutter a payment of five pesos for every tree cut, altogether apart from the usual exportation tax levied on logs or lumber.

MISCELLANEOUS NOTES.

The post office in Tegucigalpa reports a steady increase in the parcels-post service of Honduras.

A concession has been granted for the exploitation of sugar lands in the Department of Atlantida. Production on a large scale is being planned here.

The first shoe factory in Honduras has been established at Tegucigalpa.

PROPOSED RAILWAYS.

A North American resident at San Pedro Sula, Honduras, has submitted a proposition to the Government of that Republic for the construction of a railway, which will start from some point between Punta de Hisopo and Punta Cocalito, on the Tela, and Puerto Sal Bays, and terminate at El Progreso, Department of Yoro.

Another proposal has been made to the Government of Honduras by a civil engineer for the construction of a railway from Puerto de Tela, or Puerto de Sal, on the Atlantic, to Zacate Grande Island on the Pacific, via Tegucigalpa, or with a branch to that place from some convenient point to be selected by the concessionaire with the approval of the Government. He also proposes to construct branches which will start from points on the main line, and run to the boundaries of Salvador, Guatemala, and Nicaragua, respectively.

MEXICO

PRESIDENT MADERO'S CABINET.

The cabinet of Francisco I. Madero, President of Mexico, is as follows:

Secretary of Foreign Relations, Sr. Lic. Manuel Calero.

Secretary of the Interior, Sr. Don. Abraham Gonzalez.

Secretary of Justice, Sr. Lic. Manuel Vazquez Tagle.

Secretary of Public Instruction and Fine Arts, Sr. Lic. Manuel Diaz Lombardo.

Secretary of Promotion (Fomento) Colonization and Industry, Sr. Lic. Rafael Hernadez.

Secretary of Communications and Public Works, Sr. Ing. Manuel Bonilla.

Secretary of Finance and Public Credit, Sr. Don Ernesto Madero.

Secretary of War and Marine, Sr. General José González Salas.

A GOVERNMENT DEPARTMENT OF LABOR.

Ex President de la Barra, during his term of office, introduced a bill before Congress creating a department of labor under the secretary of promotion (fomento), its purpose being to deal with labor matters and to promote the issues that tend to the betterment of the working people. This bill passed the Deputies November 16, and its details will be carried out as soon as possible.

A NEW MEXICAN LEGATION.

The Government has decided to establish a legation in the Republic of Salvador, making it independent of that of Guatemala to which it has hitherto been attached.

INCREASE IN PUBLIC SCHOOLS.

The department of public instruction has taken an important step by planning to extend the system of primary schools in many ways, and particularly for the purpose of reaching the native population so that all children may have opportunity to prepare themselves for better progress in the future. They will be taught to read, write, and cipher, and effort will be made to reach out into hitherto untouched regions of the Republic. One hundred and fifty schools of this character are to be established at once, but the Republic is to be carefully districted to see where such schools are most needed. A sum of 300,000 pesos (peso = 50 cents gold) has now been set aside, which will soon be increased to 500,000 pesos in the next budget. Special instructors have been appointed, whose knowledge of the native needs and of the education best suited for them is recognized as part of their qualification.

MILITARY SERVICE IN MEXICO.

The Federal Government of Mexico has issued a decree providing for the maintenance of the army at its present quota. Under the regulations of this decree, the States, the Federal District, and the Territories are each required to deliver annually a contingent force equal to one per thousand of its population. The designations are to be made by lot and the recruits must be citizens of good standing between the ages of 18 and 22. The forces shall be chosen throughout the Republic on December 1 of each year. Persons who voluntarily desire to give their services to the army will also be received provided they possess the necessary qualifications.

SCHOOL OF AVICULTURE.

In the City of Mexico there has been opened a practical school of aviculture, where systematic instruction is given to the culture of domestic fowls. Official support is given by the department of agriculture, and the department of promotion (fomento) reserves the right to place 10 pupils in the school, selecting those worthy of aid but who can not pay the money needed to carry them through the period of apprenticeship.

WIRELESS TELEGRAPH STATIONS.

On November 6 a wireless telegraph office was inaugurated on the island of Maria Madre, off the coast of the State of Jalisco, one of the group called Las Tres Marias. This places these islands in direct communication with the mainland and therefore with the rest of the world, and will be a great boon to their inhabitants.

MISCELLANEOUS NOTES.

The Salvador Steamship Co. is to be augmented by two new steamers, which will run between Salina Cruz and ports in Salvador, Honduras, and Nicaragua.

The pecan crop this year will amount to about 60 cars, averaging 35,000 pounds each.

An ice plant is to be built in Chihuahua at a cost of about $10,000.

During the past summer about 300 head of cattle were shipped from Tampico to Italy.

Shipments of crude oil and development in the oil fields of Tampico are steadily gaining in importance.

A Mexican Gulf Coast Agricultural Association has been formed to give publicity to the natural resources of the district as an agricultural and horticultural field.

The first exportation of refined sugar from the West Coast of Mexico was shipped to the United States on September 25, 1911.

It is expected that the Northwestern Railway from Madera to El Paso will be opened in January.

GAS SUPPLIES FOR NOGALES.

United States Consul Alexander V. Dye reports that there should be opportunity for the sale of gas supplies of all kinds at Nogales, State of Sonora, Mexico, as gas plants are to be erected in the cities of San Luis Potosi and Puebla.

WHARF AT ENSENADA COMPLETED.

An advice from United States Consul Frederick Simpich, at Ensenada, reports that the new wharf is practically completed. It is 450 feet long and cost $60,000. Warehouses are being built and by January 1, 1912, it is hoped, ocean steamers will be able to dock there. A motor truck will handle freight to and from the wharf, displacing the former method of using lighters.

PORT IMPROVEMENTS AT FRONTERA.

At a cabinet meeting on November 21, it was decided to advance the contract already signed with a United States company to do the work necessary for removing the bar at the entrance of the port of Frontera in the State of Tabasco. For the canalization of the river the sum of 3,600,000 pesos (peso = 50 cents gold) has been set aside. The secretary of communications, Sr. Bonilla, and the subsecretary, Sr. Urquidi, have made a special trip to Frontera to study the project.

IRRIGATION PROJECT AND SUBDIVISION OF PUBLIC LANDS.

On December 1 the secretary of promotion (fomento) presented to the House of Deputies a bill to authorize the irrigation and subdivision of public lands and to extend credit to the agricultural needs of the country. The first article proposes to aid irrigation and colonization companies by the loan of public funds in such cases as will encourage the agricultural movement and help the native population to obtain better use of the land. The second aims particularly to a general subdivision of large landed holdings, as soon as this can be accomplished, so that both large property holders and the small farmer shall be benefited. Funds shall be made available for that purpose in whatever way may seem best, after the system to be adopted has been well examined.

CANALIZATION OF THE GRIJALVA RIVER.

The Mexican Congress has under consideration a plan to dredge and deepen the Grijalva River, so as to bring the commerce of the State of Tabasco and in fact of the entire southern neighborhood into closer touch with foreign ports by means of ocean-going steamers of a deep draft. The contract about to be signed calls for an amount of 3,000,000 pesos to be expended upon such work. There is an immense area suitable for banana cultivation in this region.

BALSAS TO ZIHUATANEJO RAILWAY.

The President of the Republic has called for bids for the construction of a railway which will start from Balsas station and terminate at Zihuatanejo in the State of Guerrero. The survey will follow the basin of the Balsas River, or will take some other course which may be considered desirable. A subvention not to exceed 12,500 pesos per kilometer will be granted. The line must be completed within eight years.

NEW RAILWAY TO CHIHUAHUA.

The government of the State of Chihuahua has granted a concession to construct and operate a railway starting from Pearson station, in the Galeana district, and terminating near the line of the State of Sonora.

RAILWAY IN THE FEDERAL DISTRICT.

Sr. Luis Barroso Arias has been authorized to construct a railway in the Federal District which will start from a point on the paved road from Mexicaltzingo to Ixtapalapa, and terminate at the village of Zapotitlan, passing through Reyes, Culhuacanm Masarriba, San Lorenzo, and Colonia de San Nicolas.

RAILWAY FROM SANTA LUCRECIA TO CAMPECHE.

The Government of Mexico has contracted with the Veracruz-Tabasco & Campeche Construction Co. to build a railway which will connect Santa Lucrecia with Campeche, thus joining the capital of the Republic with Campeche and Yucatan. This line will be of great value to agriculturists and planters of Tabasco, Chiapas, and Campeche.

NICARAGUA

THE MESSAGE OF THE PRESIDENT OF NICARAGUA, SEÑOR DON ADOLFO DIAZ.

On October 4, 1911, the President sent to the Congress (Asamblea Constituyente) a special message, dealing in detail with the proposed loan of $15,000,000 from United States bankers. He mentions the approval which the treaty covering this loan had received from the people of Nicaragua, and asserts his own desire to see it pass the treaty-making bodies of both Republics. President Diaz then explains the character of the preliminary loan of $1,500,000, which has been obtained on favorable terms, this amount being secured at par and with a rate of interest of 6 per cent. The money is to be devoted to removal of the acute money crisis and to the establishment of banking facilities, so that exchange can be maintained on a fixed basis. This preliminary loan will be guaranteed by the customhouse receipts, which will be administered by an agent approved by both

Governments. The proposed loan, says President Diaz, can be obtained on very advantageous conditions. The $15,000,000 under negotiation are to be sold at 90½ per cent, at an annual interest of 5 per cent, and payable in 37 years. The first section of the issue is to be for only $12,000,000, leaving $3,000,000 for the future. These $12,000,000 will bring a net cash sum of $10,860,000 gold, and this cash is to be devoted to the following purposes: $6,100,000 to cancel the (Ethelburga) debt; $550,000 to settle the Emery claim; $1,510,000 reserved for the settlement of claims due to cancellation of early concessions and monopolies; $1,500,000 to be used in the banking operations and to systematize the coinage of the country, and partly to clear away smaller debts incurred in previous loans; $199,790 for preliminary studies of the projected railway; $1,000,000 for running expenses ($450,000 of the loan, and $550,000 in works of public utility). The remaining $3,000,000 of bonds are destined ultimately for the construction of the railway when the time comes. This railway is promised by the President to be the cause of great activity in Nicaragua. It will offer a direct opening to the east coast and the Atlantic, and besides encouraging active trade on this account, will attract immigrants into the country. Instances are given of the great benefit from such railways in the United States and Canada, and similar advantages are bound to accrue to Nicaragua by the opening of the rich areas east of the great lakes. President Diaz closes with an earnest plea to the people to consider the loan treaty favorably. (The bill was accepted by the National Congress, on October 9, by a vote of 25 to 6.)

LEGATION AT PANAMA.

For the purpose of strengthening the friendly relations which unite the Republic of Nicaragua with Panama, the President of Nicaragua has decided to establish a legation in the capital of Panama under the direction of a chargé d'affaires.

CONTRACT FOR THE NEW RAILWAY.

This project, which was mentioned on page 1017 of the Bulletin for November, 1911, is to lie wholly within the confines of the old Moskito Reserve, and will open for use an immense area of the east coast of Nicaragua suitable for banana culture and for that of other tropical products. An English translation of the full text of the contract between the Government of Nicaragua and the United Fruit Co., which is the concessionaire, is given in The American, of Bluefields, for October 15, 1911.

MISCELLANEOUS NOTES.

Clifford D. Ham, surveyor of the port of Manila, has been appointed general collector of the customs of Nicaragua.

The Pearl Lagoon district of Nicaragua is to be purchased for nearly $250,000 for banana cultivation.

REFORMS IN THE MINING CODE.

Until the entire mining matter can be modernized, the President has decreed that certain reforms are to be in effect. Most of them refer to details in establishing mining claims, but one of the most important changes demands that within at least one year after a mining concession is granted active mining must be conducted, or a fine of one *peso* for each hectare be imposed annually. The full text of this decree, in both Spanish and English, is given in The American, of Bluefields, October 8, 1911.

PANAMA

IMPROVED FIRE-ALARM SYSTEM.

A contract has recently been signed for the installation of a modern fire-signal system in the city of Panama, and fire boxes will be placed in different parts of the city, connecting with the waterworks and the Ancon local fire stations. This, with the already efficient fire department, will add greatly to the safety of property and life, and will help to lower the insurance rates.

MISCELLANEOUS NOTES.

A real estate agency has been established at David that will operate in the Chiriqui district.

The National Assembly has passed a law governing the recruiting of laborers, which in effect is the same as that on the Canal Zone.

Panama city is constructing a public washhouse at a cost of about $12,000. It will have all the equipment of a modern laundry.

NEW STEAMSHIP SERVICE.

Beginning with January, 1912, the United Fruit Co. will establish a service of steamers of their best class from New York through Kingston, to Colon, Bocas del Toro, and Limon, departing every Saturday. The trip to Colon will be made in seven days and departing from Colon on the return voyage every Tuesday.

PARAGUAY

LOAN TO PARAGUAYAN GOVERNMENT.

Cornelius Ferris, jr., United States consul at Asuncion, reports that the negotiations for a loan of 25 million francs ($4,825,000 United States gold) came to a successful conclusion in Asuncion on the 16th of September by the signing of a contract between representatives of the Government and Brazilian and French bankers.

FOREIGN SCHOLARSHIPS FOR PARAGUAYAN STUDENTS.

The Government has recently issued regulations prescribing the manner of choosing students who are to be given foreign scholarships and sent abroad to complete their education. Students holding Paraguayan scholarships will go to France, Italy, Germany, and Belgium.

ISSUE OF BANK NOTES.

The Government has ordered abroad the following bank notes for circulation in Paraguay: 60,000 notes of the denomination of 50 pesos; 50,000 notes of 100 pesos each; 25,500 notes of 200 pesos each, and 25,000 notes of 500 pesos each.

NEW PALACE OF JUSTICE.

The Congress of Paraguay has passed a bill imposing a tax, varying from one-half per cent to 3 per cent on the fees of professional men, such as lawyers, attorneys, notaries, doctors, etc., to go into a fund to be applied to the construction of a palace of justice for the use of the tribunals of the country.

MISCELLANEOUS NOTES.

Immigration into Paraguay is principally from Germany, Argentina, Italy, and Spain.

A fur-bearing animal called in Spanish "nutra" or "nutria," meaning "otter," is found in great numbers in the streams and marshes of Paraguay.

Three plans for the construction of waterworks are under consideration. The first is the construction by the municipality. Another is a concession to a German company. The third is the organization of a local company backed by foreign capital.

AGRICULTURAL BANK.

The new building of the Agricultural Bank in Asuncion has been completed. The business of this bank in 1909 amounted to 2,942,518 pesos, as compared with 2,259,391 pesos in 1910.

NORTHEASTERN PARAGUAYAN RAILWAY CONCESSION.

The Government of Paraguay has granted a concession to Conde dos Nacimientos & Co., for the construction and exploitation of a railway from Asuncion to Santo del Guaira. This railway will be known as the "Nordeste Paraguayo."

ASUNCION TO BUENOS AIRES IN 53 HOURS.

Commencing on December 1, 1911, the trip from Asuncion to Buenos Aires by rail will be made, owing to improved ferryboat connections between Villa Encarnacion (Paraguay) and Posadas (Argentina), in 53 hours. A bridge over the Parana River between these two points is now being constructed, and when completed trains will run direct from Asuncion to Posadas. This bridge will be 1,200 meters long, and is estimated to cost $625,376 pesos, Argentine gold.

IMPROVEMENTS ON CENTRAL PARAGUAYAN RAILWAY.

The Central Paraguayan Railway, which has a capital of £3,000,000, has recently issued additional stock amounting to £600,000 to be sold in the markets and the proceeds applied to the improvement of the main line and the construction of branch lines.

NEW TRAMWAY IN ASUNCION.

The construction of the new tramway line in the city of Asuncion is being actively pushed forward. The same contractors who built the tramways of the Anglo Argentine Co. at Buenos Aires are building this line.

PERU

CABINET CHANGES.

Late reports from Lima indicate that President Leguía has made several changes in his cabinet, as follows:

Minister of government and police, Sr. José Manuel García; minister of the treasury and commerce, Dr. Ernesto Raez; minister of public works and promotion, Sr. Augustin de la Torre Gonzalez.

PROPOSED CHANGES IN THE CONSTITUTION.

The Peruvian Congress is considering an important bill which proposes to make some changes in the present constitution. Article 1 of the proposed bill provides that the Republic of Peru shall be called "United States of Peru;" article 2 substitutes the word "Federal" for the phrase "founded on unity" in article 42 of the constitution now in force; article 3 of the proposed bill divides the Territory of the Republic into 4 States, as follows:

Northern, composed of the Departments of Piura, Province of Tumbez, Cajamarca, Amazonas, Lambayeque, Libertad, and Ancachs, with the capital at Trujillo. This division, with a population of 1,529,343 inhabitants, will have 17 senators and 38 deputies.

Central, composed of the Departments of Junin, Huanuco, Province of Callao, Huancavelica, Ayacucho, and Ica, with the capital at Callao. This division, with 1,205,047 inhabitants, will have 13 senators and 27 deputies.

Southern, composed of the following Departments: Arequipa, Cuzco, Apurimac, Puno, Provincia Litoral de Moquegua, and Tacna, with the capital at Arequipa. This division, with 1,475,141 inhabitants, to have 16 senators and 39 deputies.

Eastern, composed of the Departments of Loreto and San Martin, with the capital at Iquitos. This division, with 100,596 inhabitants, to have 4 senators and 6 deputies.

The capital of the "United States of Peru" will be Lima, and will have under its jurisdiction the Department of that name. This division has a population of 298,106 inhabitants, and according to this plan will be entitled to 3 senators and 9 deputies.

Each Federal State is to have a legislature, which is to meet in its capital every two years on Independence Day, and remain in session 90 days. The Federal Congress will meet every two years in the capital of the "United States of Peru" on the same date designated for the Federal States, and will remain in session for the same length of time.

The Federal Congress shall elect within three days after it assembles a President and two vice presidents of the United States of Peru, who must be Peruvians, and citizens in the enjoyment of their civil rights. They may be naturalized citizens of the Catholic faith, but in this case shall have had at least 15 years of continuous residence in the Territory of the United States of Peru and be married to a Peruvian 10 years before their election.

The congresses of the Federal States shall also elect their respective governors within three days from the time they assemble, and these officials shall be Peruvians by birth and citizens in the enjoyment of their rights.

The terms of office of the President of the United States of Peru, and of the governors of the Federal States, shall be four years.

PERUVIAN SALT LOAN.

The Peruvian Government 5½ per cent salt loan of $6,000,000 has been floated in London at 98, and was subscribed several times over, indicating the strong credit enjoyed by this Republic.

BUDGET FOR 1912.

According to the budget for 1912, submitted by the department of finance to the Federal Congress, the receipts for the Republic of Peru for 1912 are calculated at £3,209,237, and the expenditures at £2,879,924:7:7. This leaves a surplus of £329,312:2:37, which it is proposed to use in improving the departments of war and marine.

TO PROTECT PERUVIAN ANTIQUITIES.

A recent decree has been enacted to still further protect and preserve objects of antiquity and history in Peru. Under its provisions the Government may present to scientific corporations of an official nature such objects of which duplicates exist. Of models or antiques where only the original is extant, only photographs may be taken. However, where there is no danger of defacing an original a model may be made. Excavations and explorations will hereafter be conducted under the general supervision of the Government. Until further notice, it shall be prohibited to export from Peru any antiquities of which no duplicates are possible.

MONUMENT TO PRESIDENT CANDAMO.

The Congress of Peru has authorized the municipality of Lima to select the site for the monument which is to be erected in honor of the illustrious citizen, Manuel Candamo.

INDUSTRIAL SCHOOL AT YURIMAGUAS.

Congress has approved the bill to establish a commercial and industrial school at Yurimguas, capital of Alto Amazonas, Loreto Department. It has also voted an annual appropriation of about $10,000 for its maintenance.

TO STUDY MEDICINE ABROAD.

By a decree of October 7, 1911, the Government has defined the regulations for sending annually two physicians to Europe for special studies. The candidates will be elected by the faculty of medicine at Lima from the graduating class. Those selected must be Peruvians, shall have attained the highest averages in their studies, and must be of sound health. The successful students will receive a monthly allowance of £20 each for a period of two years, together with transportation to and from the place of study.

REGULATIONS FOR PRACTICE OF MEDICINE.

The Pan American Union is in receipt of a report from consul general W. Henry Robertson, at Callao, containing the requirements of Peru for the practice of medicine and dentistry by foreign physicians.

UNIVERSITY CLUB AT LIMA.

It is pleasing to note that at Lima a group of North Americans and Peruvians, who have received their education at institutions of learning in the United States, organized a University Club to perpetuate the spirit of good fellowship which characterizes the average American college man. The first annual banquet was held last November. The dining hall was effectively decorated with the pennants and banners of the colleges represented in the club. The officers of this collegiate organization are: President, Sr. Don Fernando Ortiz de Zevallos; vice president, Mr. A. B. W. Hodges; secretary, Mr. Charles L. Chandler; treasurer, Sr. Don Alfredo Alvarez Calderón; trustees, Messrs. W. Henry Robertson and Albert W. Bryan.

RAILWAY NOTES.

The President has approved the law passed by Congress relating to the construction of railway branches from Trujillo to the mining camps at Salpo and Quiruvilca. This line is of especial importance, as it will open up for rapid development a large area of rich coal deposits.

The branch line of the Oroya-Tarma Railroad to Puerto Wertheman has also been approved.

SALVADOR

STUDENTS CONGRESS.

On November 3, during the first day of the centennial celebration of the first struggle for Central American liberty, the opening session of the Central American Congress of Students was held in the city of San Salvador with delegates from all the Republics of Costa Rica, Guatemala, Honduras, Nicaragua, and Salvador. The purpose of this international meeting was to discuss a program for the more uniform education of students of all classes in these Republics, and to bring into harmony the educational ideas prevailing there and in other parts of the world.

PAVEMENT OF STREETS.

The city of San Salvador has under consideration an elaborate and comprehensive plan for the pavement of the streets of that capital and for complete modernization of the sanitary conditions there. Various engineers have studied the problems involved in such an undertaking, and have given their approval to the practical methods adopted in other tropical cities, by which the latest systems may be applied in San Salvador.

RAILWAY TO LA LIBERTAD.

The Diario Oficial of September 29, 1911, gives the official contract submitted to the consideration of the national Government covering the construction of a railway from San Salvador to the port of La Libertad, on the Pacific coast. This railway is to connect with the line already built and operated as far as the city of Santa Tecla; it is to be of the same gauge (3 feet). The work must be concluded within two years of the acceptance of the plans by the Government and a subsidy of $7,000 gold per kilometer is granted.

UNITED STATES

COPYRIGHT PRIVILEGES TO CUBA.

Under date of November 27, 1911, President Taft issued a proclamation to the effect that one of the alternative conditions specified in section 8 (*b*) of the act of March 4, 1909 (an act to amend and consolidate the acts respecting copyright) now exists and is fulfilled and since May 29, 1911, has been fulfilled in respect to the citizens of Cuba, and that the citizens of that country are entitled to all the benefits of section 1 (*e*) of the said act, including "copyright controlling the parts of instruments serving to reproduce mechanically the musical work," in the case of all musical compositions by Cuban composers which have been published since May 29, 1911, and have been duly registered for copyright in the United States.

MEDALS AND DIPLOMAS TO SCIENTISTS.

Several medals and diplomas have been awarded by the Government of Argentina to the scientists of the United States Department of Agriculture who were responsible for the United States exhibit there. The recipients of the diplomas in the Department of Agriculture were Secretary of Agriculture James Wilson, Willis L. Moore, Dr. B. T. Galloway, William A. Taylor, Dr. A. D. Melvin, H. S. Graves, Dr. L. O. Howard, Dr. A. C. True, L. H. Dewey, Prof. F. Lamson Scribner, C. M. Carlos Ellis, Joseph Abel, J. A. Schulte, F. L. Goll and Col. S. R. Burch.

Medals were awarded to Secretary James Wilson, Prof. F. Lamson Scribner, L. H. Dewey, C. M. Carlos Ellis, Joseph Abel, J. A. Schulte, and Col. S. R. Burch.

TRADE AT PORT ARTHUR, TEXAS.

It is gratifying to record in the columns of the BULLETIN some data which has come to the Pan American Union regarding the growing trade of Port Arthur, Texas, with Latin America. According to figures at hand, from January 1 to November 1, 1911, there came direct to Port Arthur from the West Indies 16 vessels, from Mexico 26 vessels, and from South American ports 26 vessels. There cleared direct from Port Arthur, with cargo, for the West Indies 9 vessels, for Mexico 36 vessels, and for South America 8 vessels. The total value of this commerce was $1,031,496, consisting of exported oil, lumber, fruits, machinery, salt, etc. The chief item of import was $119,620, being mainly bananas.

SPANISH CLUB IN IOWA.

There was recently organized in Des Moines, Iowa, a club called "La Junta Castillana". The meetings of this club are conducted in the Spanish language. Natives of Mexico, Cuba, Central and South America, Philippine Islands, and Americans speaking Spanish comprise the membership.

URUGUAY

DEVELOPMENT OF MINERAL WEALTH.

It is reported that the Government of Uruguay will soon appoint a committee to investigate the mineral wealth of the Republic. The committee is to begin its work in the Department of Maldonado, which is noted for its fine marble quarries and extensive deposits of hematite and manganese ores. Coal fields, which are also known to exist in the Republic, will be a subject for the investigation of this committee. It is well known that Uruguay contains a large amount of mineral wealth, but the extent and richness of the deposits have not yet been ascertained.

NEW LIGHTHOUSE.

The department of public works, through its hydrographic bureau, has prepared plans for the erection of a large lighthouse at the north head of the bank in the River Plate. This is known as the "English Bank," and in bad and foggy weather is a dangerous impediment to navigation. The height of the lighthouse is to be 41 meters, and bids will be received by the Government for its construction. The light from this tower will be visible from Montevideo, and a wireless-telegraph office will be installed there.

TITLE AND LAND BILL.

A message and bill has been presented to the Federal Congress relating to title deeds of persons occupying fiscal lands, and covering the redemption of same where holders fail to make good their claims. The bill provides for a loan of $1,550,000 for the redemption of lands.

WATER SUPPLY AND SANITATION OF PAYSANDU.

The plan for the sanitation of the city of Paysandu and the supplying of that municipality with a potable water supply has been approved by the Federal Government. Felix Allard and Abel Couvreux are among the principal persons interested in carrying out this undertaking.

SOUTHERN EMBANKMENT CONSTRUCTION.

The syndicate having in charge the "Rambla Sud" or Southern Embankment construction at Montevideo has cash subscriptions to the amount of £350,000 to be used in the work. The rest of the subscribed capital will be ready by January 1, 1912, so that construction can be rapidly pushed forward under the supervision of the department of public works.

INAUGURATION OF CENTRAL URUGUAY EASTERN EXTENSION.

The official inauguration of the Treinta y Tres Central Uruguayan Eastern Extension took place early in November, in the presence of the ministers of the interior and public works. The completion of this railway will greatly assist in the development of the progressive town of Treinta y Tres and the rich cattle and agricultural region tributary to the railway line. The Departmental Cattle Show was also inaugurated at the same time.

EXTENSION OF TIME ON COMPETITION FOR ARTIGAS MONUMENT.

Announcement is made by the national commission of the centenary of the battle of Las Piedras, that the duration of the competition for a monument to Artigas has been extended to June 30, 1912. The original date had been fixed for December 31, 1911, but because of the international scope of this competition, it has been deemed best to postpone the opening of the designs for the statue to this Uruguayan hero until 4 o'clock in the afternoon of June 30, 1912.

Full particulars concerning the competition may be obtained by addressing the consul general of Uruguay at 17 Battery Place, New York City.

VENEZUELA

REORGANIZATION OF PUBLIC INSTRUCTION.

The department of public instruction has published a resolution based on a recommendation of President Gomez, reorganizing the primary school system of the Republic. The new system includes the substitution of large hygienic federal buildings for the present small schoolhouses, and the establishment of schools in all of the villages of the country. In this way it is hoped to obtain a scientific school organization whose effects shall be far reaching and beneficial.

NEW COINAGE.

The President has approved the bill providing for the mintage of coins to the value of 10,000,000 bolivars in gold and silver. The Banco de Venezuela will control this new coinage, which will be minted in the following denominations:

3,000,000 bolivars, in gold of 20 bolivars.
5,000,000 bolivars, in silver of 5 bolivars.

1,000,000 bolivars, in silver of 2 bolivars.
500,000 bolivars, in silver of 1 bolivar.
300,000 bolivars, in silver of one-half bolivar.
200,000 bolivars, in silver of one-fourth bolivar.

FRANCE HONORS MIRANDA.

The Government of France, in honor of the memory of the Venezuelan patriot, Gen. Francisco de Miranda, who rendered such valuable services in the French army, has placed in the Army Museum at Paris a splendid bronze medal showing the bust of the South American patriot and liberator. The medal was designed by Sr. P. J. Domindo Fourcade.

HOMAGE TO SAN MARTIN.

As a permanent expression of the admiration which Caracas has for the illustrious Argentine hero, Gen. San Martin, President Gomez has decreed that one of the new avenues of the Venezuelan capital shall be named "Avenida San Martin."

EXEMPTION FROM DUTIES.

According to a communication from the minister of finance to the minister of foreign affairs, the consulates in foreign countries will be advised that hereafter shipments of coined gold into Venezuela will be exempted from the payment of consular fees.

COMMERCE FOR 1910-11.

According to late data the foreign commerce of Venezuela for the year 1910–11 amounted to 80,178,933 bolivars imports, and 96,920,229 bolivars exports. (Bolivar valued at 19.3 cents United States gold.)

CUSTOMHOUSE AT IMATACA.

A dispatch from the chargé d'affaires of the United States at Caracas advises that the customhouse at Imataca was formally established on Tuesday, October 26, 1911, as announced in the November issue of the Bulletin.

DAIRY FARM.

The department of fomento has entered into a contract with a native company for the establishment of a dairy-products farm in Maracay City. The products are to be offered to the public at a price which shall be 10 per cent less than similar products heretofore imported.

AUTOMOBILE SERVICE.

From Jefferson Caffery, Esq., the Chargé d'Affaires of the United States at Caracas, comes another communication indicating that an automobile service will be established for passengers and freight between the cities of Valencia and Nirgua.

TELEPHONE SERVICE.

The department of posts and telegraphs has issued a statement that on August 15, 1911, there were in use throughout the Republic 17,058 kilometers of line with 4,449 telephone apparatuses.

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